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Evaluation of a Model Comparative Drug Price Resource in Fostering Prescriber - Patient Engagement, Lowering Consumer Costs and Improving Adherence

Marcia Hams

Wells Wilkinson

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Marcia Hams, MA and Wells Wilkinson, JD
Community Catalyst, Inc., Boston, MA

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Executive Summary

Background: *A majority of patients under age 65 face high and increasing out-of-pocket medication costs that interfere with their treatment. When polled separately, most physicians and patients report an interest in better addressing drug costs and affordability issues, but only a small percentage of physicians know the prices of medications or discuss affordability with their patients. This may be due to the fact that drug prices are not transparent to prescribers or patients and that out-of-pocket costs for insured patients can vary widely.*

Objective: *We investigated primary care physicians' interest in a model web-based comparative drug pricing resource designed to create transparency of drug prices and (for Medicare D only) out-of-pocket costs. The study objectives were to:*

(1) Explore the factors affecting prescriber communications with patients on selection, costs and affordability of prescription drugs.

(2) Assess the appeal and potential utility of a model comparative drug price resource in improving shared decision-making between prescribers and patients. This resource presents real-time prices for brand-name and generic medications at pharmacies in specific ZIP codes, allowing patients and prescribers to shop for lower-priced drug products.

Methods: *Eight in-depth qualitative telephone interviews with primary care physicians were followed by an on-line quantitative survey of forty primary care physicians. Physicians were randomly selected but screened to include only those expressing a high level of concern (eight or higher on a 10 point scale) about patients' ability to pay for their medications. Participants took the survey via a website. During the survey, respondents were presented with two screen shots of our model resource, a website detailing retail prices for comparable generic and brand-name drugs at local pharmacies. (Figures 1 and 2)*

Results: *The physicians in our sample reported discussing drug cost issues regularly with their patients, and spending considerable time seeking resources to assist patients with drug affordability. Most respondents helped patients obtain lower costs by prescribing generics and providing samples. Drug company promotions, discounts or patient assistance programs were also used. Physicians responded enthusiastically to our resource, believing that it would save staff time and increase the efficiency of their practices. More importantly, they felt it would facilitate easier discussions of drug costs and affordability, and thus could increase patient engagement, reduce non-adherence, and improve patient care.*

Conclusions: *Our study suggests that a web-based drug pricing resource would likely be quickly adopted by physicians and other prescribers, particularly those who are already concerned about the cost burden that medications pose for their patients. Explanations for interest in our resource include: the current lack of transparency in drug prices, and physicians' desire to be engaged with their patients around affordability of their prescription drugs [1]-[3]. Further, our results suggest that use of such a resource could provide valuable improvements to provider-patient engagement, and ultimately result in improved care, while also lowering costs.*

Corresponding author: Marcia Hams, MA; Community Catalyst, Inc.
30 Winter St. 10th Floor, Boston, MA 02108, 617.338.6035
Fax: 617.451.5838, www.communitycatalyst.org

Background

Health care and medication costs

In 2010, nearly $2.6 trillion was spent on health care in the U.S., an average of $8,402 per person, with a staggering 12 percent of these total expenditures paid by consumers directly [4]. At 3.9 percent a year, the rate of growth in health care costs continues to outstrip the overall growth of the economy, increasing the costs for consumers, employers and government. A 2012 Kaiser Tracking Poll found that more than half of Americans said their families cut back on medical care due to cost concerns in the previous year [5].

Prescription drug expenses are widely reported to be a tenth of overall health care expenses, or about $260 billion in 2012. However, that share rises to 17 percent if prescription drugs used in physicians' offices, hospitals, clinics and other settings, as well as over-the-counter and non-prescription drugs, are included [6].

In 2010, consumers paid about 20 percent of the cost of prescription drug expenses, significantly above the average 12 percent contribution for other health care services [7]. Those who incurred any prescription drug expenses (about two-thirds of Americans) paid on average $1,302 per person [8]. However, those families and individuals that used more than the average number of prescription drugs—such as seniors and people with chronic diseases—were confronted with much higher than average costs, and those who were uninsured were forced to either pay the full cost or go without their medication. For example, uninsured non-elderly adults (aged 18-64) surveyed in 2012 were more than twice as likely as those with insurance to say that they could not fill a prescription or that they had skipped doses [5].

An individual patient's cost burden for prescription drugs is dependent upon a number of inter-related factors: whether they have insurance, how their insurer structures "cost-sharing" or out-of-pocket costs for prescriptions, the number of drugs they are prescribed, which drugs are selected by their prescriber, and the actual retail costs of those drugs.

The number of drugs prescribed in the U.S. has climbed steadily for decades, with outpatient prescriptions rising from 1 billion in 1970 to more than 4.1 billion in 2008. The sharpest rise occurred from 1997 to 2008, which may be due to several factors, including the development of new drugs for previously untreatable conditions such as HIV, expanded treatment guidelines for certain conditions, such as high cholesterol, and promotional marketing to patients and physicians. For instance, direct-to-consumer advertising (DTCA) rose dramatically after FDA relaxed advertising regulations in 1997 [6]. In 2008, the industry spent $4.4 billion on DTCA [9].

Advertising and promotions to physicians have also risen dramatically; from $3.5 billion in 1996 to $6.6 billion in 2009 (this excludes samples, valued at $15.9 billion when last documented in 2004). Some investigators estimate the total promotional spending by industry to be much higher, at $57.5 billion per year [10]. Marketing has an effect not only on the volume of prescriptions written, but also the types of drugs prescribed, because industry promotes the newer, more expensive brand-name drugs and not older, better established drugs, which are mostly generic.

Finally, the average prescription price has increased from $22.06 in 1990 to $71.69 in 2008, nearly twice what it would have been ($35.90) if the price had risen at the same rate as the consumer price index (CPI). Brand-name drugs are far more costly than generics, averaging $137.90 per brand-name prescription vs. $35.22 for generics in 2008 [6]. As a result, while generics now account for 80 percent of prescriptions, they make up only 27 percent of total spending on prescriptions. [35]

Burden of medication costs and its impact on adherence to treatment

Medication adherence refers to the "extent to which the patient's action matches the agreed upon recommendations" and has come to be adopted as a less paternalistic term than medication compliance, or the "extent to which a person's behavior coincides with medical or health advice [11]." While we use the term adherence in this paper, we note that an even more patient-centric concept, "concordance", has been recommended by some. Concordance suggests "that the work of the prescriber and patient in the consultation is a negotiation between equals and... [t]he aim is a therapeutic alliance between them..." [12]. As we discuss later, such shared decision making may be important to successful prescriber-patient communication about costs.

Lack of adherence to long-term pharmaceutical treatment regimens undermines the effectiveness of medical care. The World Health Organization found that adherence to long-term therapy for chronic illnesses in developed countries averaged just 50 percent, with even lower rates in developing countries. Solving the problems faced by patients in adhering to medication therapy means addressing a number of interrelated barriers, including "social and economic factors, the health care team/system, the characteristics of the disease, disease therapies and patient-related factors"[13]. The overall cost burden of medications can play an important part in whether patients can or will take medications they are

prescribed. Non-adherence with drug therapy is associated with many factors, including limited income, serious or chronic health conditions and/or the extent of cost shifting to patients through high co-pays or deductibles, formulary restrictions or outright caps on coverage [14]-[18]. Thus, for patients facing these challenges, the prescriber's selection of expensive brand-name drugs over low-cost generics can significantly reduce adherence to treatment.

Cost burdens are highest for patients without insurance. However, patients who are underinsured or are exposed to high levels of cost sharing can also struggle to adhere to treatment. Nearly all commercial health insurance is designed to facilitate the selection of lower cost, higher value medications through the use of policies such as tiered formularies with higher co-pays for brand-name drugs, prior authorization for brand-name drugs, or step therapy (beginning therapy with the lower-cost alternative). For patients with fewer health care needs, these policies can, with appropriate protections, facilitate the choice of evidence-based therapies. However, policies imposed by some insurers—benefit caps or limits on the number of medications allowed each month, etc.—can leave patients without coverage for needed prescriptions, leading to non-adherence and increased use of other health care services [18], [19].

A synthesis of 132 articles from 1985-2006 on the impact of changes in insurance benefit designs found that increases of 10 percent in patient costs were associated with a 2 percent to 6 percent decline in prescription drug use or expenditures. However, the impact of patient cost sharing varied by patient characteristics, such as income and clinical condition. Increased cost-sharing for chronically ill patients (such as those with congestive heart failure, lipid disorders, diabetes and schizophrenia) was associated with reduced use of medications and greater use of inpatient and emergency medical services [18]. In contrast, with reduced cost-sharing for selected chronic conditions, adherence to medication was found to improve by 3.1 percent, while overall health care costs were stabilized or declined [20].

Prescriber– patient communication about medication costs

A 2011 Consumer Reports survey of primary care providers found that "non-compliance with advice or treatment recommendations" was the top complaint doctors had about their patients, and thirty-seven percent thought it negatively affected their ability to provide quality care "a lot" [25]. As the authors point out, however, patients face many challenges in following treatment recommendations. Indeed, in a subsequent survey of patients, Consumer Reports found that half of the consumers surveyed who took any prescription drug had faced difficulty affording their out-of-pocket costs. Yet most of these consumers did not feel comfortable discussing their difficulty affording medications with either their doctors (48 percent) or pharmacists (68 percent) [36].

Despite the negative effect of medication cost burdens on patient adherence, most physicians know little about drug prices or differences in price among competing therapies. This limits physicians' ability to advise patients about drug costs and work with them to address affordability. Physicians report that patients are also frequently unaware of the costs of medications prescribed [1], [2], [17], [21]. A substantial proportion of patients also report being uncomfortable discussing—with either their prescribing doctors or their pharmacists—their inability to afford medications [22]. Yet physicians, other prescribers, and pharmacists are the experts that patients should be able to rely upon to help them reduce their monthly out-of-pocket cost burden.

Given limited knowledge about drug costs by both providers and patients, it is not surprising that discussions between patients and prescribers about the costs of medications rarely occur. In one survey of general internists and their patients, only 35 percent of physicians and 15 percent of patients ever discussed patients' out of pocket costs [22]. Yet other research shows that physicians want to know more about costs, and both patients and physicians express a desire to engage with each other more frequently about out-of-pocket costs [1], [2], [24].

Methods

We conducted a pilot study of primary care physicians to explore the factors affecting their communication with patients about drug prices and affordability. We also assessed the appeal and utility of a model web-based drug pricing resource to facilitate communication and enhance shared decision-making between providers and patients. The model drug pricing resource provided price comparisons between one group of widely prescribed medications (statins), at various pharmacies within specific ZIP codes, allowing prescribers to more clearly understand the cost impacts of their drug selection.[1]

This model resource was designed for hypothetical use by prescribers and patients. While patient engagement is a

[1] Our model resource was constructed based on a combination of key features available in two current online resources -- up-to-date local retail drug price information from www.GoodRx.com, provided in the context of therapeutic recommendations modeled after from Consumer Reports Best Buy Drugs. See Appendix C for a comparison of existing websites that provide drug price information.

critical component of appropriate and effective treatment, physicians and other prescribers have the clinical expertise, and are ultimately responsible for authorizing any prescription. By contrast, patients have superior knowledge about their personal financial situations and abilities to pay for drugs, which impacts adherence to the prescriber's recommendations. In this study, we sought to understand how such a model resource might increase physician awareness of the actual costs of medications, and their impact upon patients' cost burdens. We explored whether having this information could facilitate better communication with patients about their cost burdens, potentially reducing cost-driven non-adherence.

The proposed questions of interest were:

- Whether and how do prescribers currently communicate with their patients about the prices of medications, or the patient's ability to pay for them?
- How open are prescribers to engaging with patients on out-of-pocket or overall drug costs as part of shared decision-making?
- What strategies would prescribers use to discuss retail drug costs with patients?
- How valuable is accurate, real-time prescription drug cost data to prescribers?
- How likely would it be that a drug pricing internet resource could facilitate prescriber initiation of this communication process, increased consumer engagement, and more effective decision-making?
- What barriers, if any, exist to prescribers using such a resource with patients?
- Are there characteristics of such a resource that might make it most useful to prescribers and patients?

We developed the final study design, qualitative interview protocol, and Internet survey in collaboration with Medical Marketing Research, Inc. (MMRx), and MMRx conducted the interviews and survey. The qualitative phase of eight in-depth telephone interviews was conducted with primary care physicians. The results were summarized and used to design the Internet-based quantitative survey of 40 primary care physician respondents.

Sample

Since studies have shown that most physicians rarely discuss drug costs or affordability with their patients, we selected a sample of primary care physicians who were more likely to engage frequently with patients. Our assumption was that, without this selection, the small size of the pilot study sample would yield too few physicians with interest or experience in addressing cost and affordability issues, and thus we would not be able to gather detailed information on the dynamics of these physician-patient communications about drug costs, or the potential utility of our model resource. We also selected physicians who were in practice less than twenty years, to mitigate the potential for variation based on age in our small sample.

We screened and selected primary care physicians who self-reported (1) a high level of concern for the cost of prescription medications prescribed for their patients and (2) that they work in practices with a preponderance of middle class and lower middle class/working poor patients who were not on Medicaid.[2]

Qualitative Telephone Interviews

Eight primary care physicians were screened and recruited for inclusion in the qualitative phase from a total of two hundred potential candidates randomly selected from MMRx's proprietary database of 10,000 primary care physicians. Respondents were paid an incentive of $60 and participated in a one-on-one telephone interview of approximately 30 minutes in duration.

During each interview, a physician was given a link to two hypothetical Internet sites labeled 'Concept 1' and 'Concept 2', as shown in Figure 1 and Figure 2 respectively, that presented comparative drug price information. Following exposure, participants responded to questions regarding likely usage of the comparative price resource and the advantages it may offer in patient care. (See Appendix A for the Interview Protocol.)

Follow-Up Survey

Forty online surveys were completed by respondents over the course of five days. Respondents were again randomly recruited to participate from MMRx's PCP data base of 10,000 primary care physicians, using the screening criteria above. Approximately 6,000 contacts were made, and 219 physicians attempted to complete the survey. Of these, 13 dropped out for no particular reason and 179 did not meet the screening criteria because they:

- were in other specialties (36)
- spent less than 50 percent of their time in clinical practice (3)
- were in practice for more than 20 years (55)
- were concerned with the cost of drugs prescribed only 1-7 on a 10 point scale (22)
- were over quota for the region (5)

[2] Medicaid cost-sharing levels are typically nominal for all covered medications; thus these patients were likely to be less sensitive to differences in co-pays because the differences are small.

Participants visited a web-based survey site. (See Appendix B.) During the course of the survey, respondents were presented links to two additional websites hosting variations of our model drug pricing resource. These were labeled 'Concept 1' and 'Concept 2', as shown in Figure 1 and Figure 2 respectively.

Concept 1 was a screen shot of a hypothetical website that would provide information on comprehensive retail prices for brands and competing generic therapeutic alternatives, at different pharmacies within a 25-mile radius of a selected ZIP code. (Drugs in the statin class were used in this demonstration, with prices for 30 pills of a uniform 20 mg dosage). The survey introduced Concept 1, asking respondents to make the following assumptions about the functional utility of the model resource:

> *"Assume that a resource could be made available that showed you information about the costs of brand-name and generic drugs at specific pharmacies within a Zipcode, and it allowed you to include all other pharmacies within a 1, 5, 10 or 20 mile radius of the Zipcode.*
>
> *Assume that the resource could provide the actual costs of all doses of a drug, allowing you to compare prices for that drug at different pharmacies.*
>
> *Also assume that the resource would include the names and prices of lower cost competing therapeutic alternatives in the same therapeutic class.*
>
> *Assume that these alternatives were chosen by an independent scientific advisory board, unaffiliated with any drug manufacturer, based on reviews of available studies."*

Restated, the model resource would provide the actual retail costs of brand-name and generic drugs, for all doses, at all pharmacies in a 20 mile radius, including the names and prices of lower-cost competing therapeutic alternatives, chosen based on unbiased scientific sources.

Figure 1
Concept 1: Hypothetical screenshot of our model resource of comparative retail prices.

Information provided: comparison of out-of-pocket costs for brands and generics (thirty 20 mg tablets) that are therapeutic alternatives, at different pharmacies within a 25-mile radius of a zip code.

To be used for: patients with no insurance, or for patients paying full cost of drugs while in the doughnut hole.

www.RxCost.com [fictitious] **ZIP CODE: 33333**

	Lipitor	Atorvastatin	Simvistatin	Others
Lowest price available:	*As low as*	*As low as*	*As low as*	*As low as*
Mail-order	*$168.30*	*$16.00*	*$3.50*	*$3.50*
Walk-in	*$180.33*	*$16.23*	*$3.00*	*$3.00*
Mail Order Pharmacy				
HealthWarehouse *(online)*	168.30	16.00	3.50	(varies)
Walk-In Pharmacy				
Price Chopper	180.33	16.23	3.00	(varies)
Walmart	180.33	16.74	10.48	(varies)
Kmart	180.33	16.23	10.48	(varies)
Target	180.33	16.74	10.48	(varies)
Costco	180.33	16.23	5.90	(varies)
Big Y Pharmacy (9 locations)	180.33	24.78	10.48	(varies)
Stop n Shop	180.33	16.23	10.48	(varies)
Rite-Aid	180.33	18.23	9.99	(varies)
Main St. Pharmacy	180.33	24.78	16.45	(varies)
Walgreens	181.31	19.48	10.48	(varies)
CVS Pharmacy	183.58	16.70	7.45	(varies)

(click here for 9 more locations)

Concept 2 presented the same information, but replaced retail prices with out-of-pocket co-payments under Medicare Part D, in any instances where the copayment is less than the retail prices. The introductory text asked respondents to assume that the resource would have the same functionality as Concept 1 but also allow users to input the name of the patient's Medicare Part D plan to see the expected co-pay amount (see survey Q16, Appendix B, for full text).

Figure 2
Concept 2: Hypothetical screenshot of our model resource of comparative drug retail prices.

Information provided: comparison of out-of-pocket costs for brands and generics (thirty 20 mg tablets) that are therapeutic alternatives, using the lower of the retail price, or the copayment, at different pharmacies within a 25 -mile radius of a zip code.

To be used for: patients with insurance, such as the Medicare Part D drug plan AARP Medicare Rx Enhanced.

www.RxCost.com [fictitious] ZIP CODE: 33333

	Lipitor	Avortastatin	Simvistatin	Others
Lowest price available:	*As low as*	*As low as*	*As low as*	*As low as*
Mail-order/online	N/A	*$16.00*	*$3.50*	*$3.50*
Walk-in	*$40.00*	*$16.23*	*$3.00*	*$3.00*
Your Medicare Copay:	*$40.00*	*$25.00*	*$4.00*	(varies)
Mail Order Pharmacy				
HealthWarehouse *(online)*	N/A	16.00	3.50	(varies)
Walk-in Pharmacy				
Kmart	40.00 *(copay)*	16.23	4.00 *(copay)*	(varies)
Costco	40.00 *(copay)*	16.23	4.00 *(copay)*	(varies)
Price Chopper	40.00 *(copay)*	16.23	3.00	(varies)
CVS	40.00 *(copay)*	16.70	4.00 *(copay)*	(varies)
Walmart	40.00 *(copay)*	16.74	4.00 *(copay)*	(varies)
Target	40.00 *(copay)*	16.74	4.00 *(copay)*	(varies)
Rite-Aid	40.00 *(copay)*	18.23	4.00 *(copay)*	(varies)
Walgreens	40.00 *(copay)*	19.48	4.00 *(copay)*	(varies)
Big Y Pharmacy	40.00 *(copay)*	24.78	4.00 *(copay)*	(varies)
Main St. Pharmacy	40.00 *(copay)*	25.00 *(copay)*	4.00 *(copay)*	(varies)

(click here for 18 more locations)

Following exposure to the concepts, participants responded to questions regarding the features of this model resource, their interest in using it, and the potential advantages it may offer in patient care.

Results

1. Qualitative Interview results

The responses from the preliminary interviews provided additional insights into our two important themes—prescriber-patient communication and burden of drug costs—as well as feedback about the resource. These data were used in the design of the quantitative survey.

The eight respondents interviewed were from North Carolina, New Jersey, California, New York, Massachusetts, and Florida and ranged in experience from 8 to 24 years in practice. Three of the physicians interviewed were female, five were male. Respondents reported approximately two-thirds of patients in their practice were fully insured, and all rated their concern about patients' ability to pay for prescription drugs as an 8 or higher on a 10-point scale, where 10 equals extremely concerned.

Prescriber-patient communication about medication costs

Interviewees noted that conversations about drug costs have become routine for physicians caring for both low-income and higher-income patients:

> *"You have to be very open. If you are not willing to talk about the difficulties, then the patient may not be taking anything. And the physician is then not helping the patient's disease state at all."*

> *"The initial discussion takes place as I am explaining their condition… We look at the patient's coverage, drug stores, websites for coupons, prescription cards…"*

> *"When the patients return to my office I ask them for concerns/inability to pay. It does not eliminate problems with them taking their medication. It's difficult for patients to admit the inability to pay for their medications."*

> *"Cost is always a concern."*

Some physicians interviewed preferred to wait for the patient to initiate discussions of cost and affordability:

> *"I do not normally initiate with every patient. The patient talks about difficulty with cost then we take a look at their medications and determine a cheaper alternative."*

Estimates of how much time each responding physician or their staff spend addressing drug costs varied but were sometimes substantial:

> *"I discuss cost about seven to eight minutes with a general patient."*

> *"On average, I spend about one hour a day discussing cost with patients"*

> *"My partners and I were discussing this at our last meeting, and estimate we each spend at least 30 minutes a day discussing and/or dealing with cost-of-medication issues."*

Burden of medication costs and adherence to treatment

Physicians interviewed reported learning after the fact that affordability had been an issue, leading patients to take worrisome measures to reduce their cost burden. These include failing to fill prescriptions, or taking less than the prescribed dose, to stretch out their prescriptions. Additional time burdens on physicians and staff also resulted when the patient had to ask the pharmacy to call to replace a prescription the patient could not afford.

"Some medications are cut in half but may not be as effective, may take every other day, make some medications last 60 days instead of 30 days, take their spouse's medication, or use medications only days that it's needed."

"Fifteen to 20 times per month I have patients who do not get their medication because it's too expensive. Another 15 to 20 times, I have to field pharmacy requests to prescribe a cheaper medication."

Some physicians interviewed reported using the limited price information they have to inform patients about drug prices, or taking additional steps to gather more information. They also attempted to assist patients in a number of ways, including offering samples, prescribing longer supplies, prescribing combination products, writing for generics, or recommending discount programs at local retailers or pharmacies.

"We look for what's best for the patients. I will tell patients where to get the cheapest medications. I also have one of my employees call pharmacies and check prices."

"We try to stick to the Target $4 list as much as we can, co-pay cards, supplement with samples."

"Reps will give us a list of the cost of brand name products at local pharmacies."

Response to specific characteristics of the on-line resource and suggestions for its design

After reviewing a description and screenshot serving as a representative sample of a model drug pricing resource, all participants responded favorably. They predicted that such a resource would be "very useful" for providers, their staff, and patients themselves:

"Assuming it's easy to use, I would use it 10 times a day."

"This may save some time. My assistant can easily bring this up and call the prescription in after telling the patient the cost."

"It's a great idea."

"I will use this tremendously because it is doing the work for me. This is one source compared to many sources."

"My staff and I will go over this with patients. I'd also give the website to patients."

"If this was available, I would use it today."

Interviewees felt this model resource could save time by addressing out-of-pocket costs up-front during the patient visit, rather than later on the phone with pharmacists and patients seeking a switch to more affordable drugs. Those physicians who report routinely surveying local pharmacies to gather price information felt this model resource would save time by replacing those efforts.

Some suggested the model resource could be enhanced by:

- integrating insurance coverage and copay amounts
- providing address and contact information for pharmacies
- highlighting lowest cost options
- making it available on a mobile device

Potential drawbacks or limitations regarding this resource dealt with the time necessary to use it and the potential challenges in integrating it with existing but non-standardized electronic systems:

"It will give the patient a choice, it will save the patient money, it's a useful tool, but it also adds to our everyday duties."

"It needs to be customizable to patients' insurance plan. All insurance plans (even with the same provider) are not the same."

"This should be linked to the e-prescribing link. Then it could be readily available for the patient."

"Multiple practices would have different e-prescribing platforms."

"The same equipment must be used generally to work with any and all e-prescribing platforms."

"*This would not have to be linked with e-prescribing."*

Still, interviewees that saw its limitations were still receptive to working around those barriers:

"The barriers are technical problems, data could be lost, patients could hack in, everybody is not computer literate, some patients can't afford a computer. Overall, though, my feelings are positive."

"I wish I had the unlimited time to spend with every patient, but only in an ideal world. I would be more than willing to give this information to patients, but I would utilize it only about 5 percent of the time in my patient interactions, not every patient and every drug."

"I would use this with five patients a day with the flexibility to be adjustable with insurances. I would use this with two patients a day without the flexibility to be adjustable with insurances."

Finally, if the resource were to include copay information just for Medicare Part D beneficiaries, but not members of other plans, interviewees thought the resource would still be useful.

"Even though the site will host only Medicare Part D, the patient will still be able to choose the cheaper medication."

"I might have more of a soft spot for that age population. I may help them out more."

"This will be useful because of the doughnut hole, period."

Some felt that the resource could impact cost, efficiency, and even adherence:

"Extremely efficient, cost effective, save on time, increase compliance because the patient will know the cost and will take the medicine."

2. Quantitative Survey Results

As described above, 40 online surveys were completed by primary care physicians. The characteristics of these respondents were:

- Primary Care Physician (n = 40)
- Percent of professional time spent in clinical practice (mean = 94 percent; S.D.=8.72)
- Years in practice (mean = 1; S.D.=3.34)
- Level of concern on a ten point scale (1=not concerned, 10=extremely concerned) with the cost of prescription medications prescribed for patients (mean = 8.95)
- Gender: Male (30), Female (10)
- Region: Northeast (11), Midwest (11), South (10), West (8)
- Practice Type: Single specialty group practice (16), Multi-specialty group practice (13) Solo practice (11)
- Practice Demographics: Middle class (49.5%), Lower-middle class/working poor (30.2%)), Upper class (16.6%). Patients speaking Spanish as a first language were 13.3% of these practices. [3]

Prescriber-patient communication about medication costs

Respondents reported seeing an average of 30 patients a day in their practices, and discussing the cost of prescription medication with an average of 13 patients a day (43 percent). Total cumulative time spent on these discussions was estimated to be an average of 1 hour per day of physician and/or staff time. (Table 2)

Half of the survey respondents found it relatively difficult to engage patients in discussions concerning the cost of the medications they prescribe. Fifty percent of respondents rated the difficulty as six or higher on a 10 point scale. At the same time, 50 percent of respondents found discussions of drug costs to be comparatively easier, rating the difficulty as a five or lower, yielding a bi-modal distribution. (Table 4)

One open-ended question asked respondents how issues concerning the cost of medications, or their patients' abilities to afford or access their medications, are raised when such discussions do occur. Responses included: the physician asks patients if they can afford their medications (32.5 percent); asks patients if they have had any problems getting or taking their medications (17.5 percent); or asks patients if they have prescription drug coverage (7.5 percent). Respondents also report that patients bring up the issue about 30 percent of the time, often as a complaint about the cost of medication. (Table 5) Overall, it appears that both patients and physicians raise this issue directly and indirectly, but that physicians initiate these discussions in nearly twice as many different ways as their patients do.

[3] We included this query given that Spanish-speaking Latina/os constitute a disproportionately large segment of the uninsured and lower income population – in 2013, 33% of Hispanics lack of insurance coverage, compared to 19% of the U.S. population overall. And many Latinos will likely remain uninsured, despite the recent increases in enrollment under the ACA in early 2014, because more than half (51%) of Hispanic uninsured adults have incomes at or below the Medicaid expansion limit, and thus will fall into the Medicaid Gap if living in states that do not expand Medicaid. *See* Kaiser Family Foundation (2013) Issue Brief: The Impact of the Coverage Gap in States not Expanding Medicaid by Race and Ethnicity. Available: http://kff.org/disparities-policy/issue-brief/the-impact-of-the-coverage-gap-in-states-not-expanding-medicaid-by-race-and-ethnicity/. Accessed 20 May 2014.

Physicians reported that they use many types of information to answer patient questions concerning the cost of medications. These include cost information from local pharmacies or pharmacists (30 percent), formulary information provided by insurers (20 percent), and cost information from drug company sales representatives (20 percent). Respondents gained cost information from government or other websites 10 percent of the time and from the Epocrates handheld app 10 percent of the time. (Table 6)

Burden of medication costs and its impact on adherence to treatment

Respondents reported encountering situations of non-adherence to treatment due to the cost of medication frequently—an average of 26 times per month patients had not filled a prescription and 28 times per month patients were taking less than the prescribed dose due to costs. (Table 3)

In response to an open ended question about current strategies respondents are using to reduce the cost of medications for some or all of their patients, the top two strategies were prescribing generics (60 percent) and giving free samples to patients (40 percent). To a lesser extent respondents used drug company patient assistance programs (17.5 percent), coupons and rebates (17.5 percent), as well as similar cost reduction cards and vouchers. Five percent recommended that patients split pills and only 5 percent explicitly mentioned using the $4/$12 drug lists available at some pharmacies. (Table 7)

Response to the model web-based drug pricing resource

More than 80 percent of respondents had a positive response to the web-based drug pricing resource, with just one respondent having a negative response. (Table 8) Ninety percent said they would use the resource, and 35 percent thought they would use it frequently. (Table 11) On the whole, physicians predicted that using this resource would significantly reduce cost-related barriers to adherence. Eighty percent thought it would substantially (seven or higher on a 10 point scale) reduce how often patients failed to fill their prescriptions due to cost, and 70 percent predicted it would significantly reduce how often patients did not take their medications. (Table 14b, 14c) In addition, 90 percent of respondents predicted this resource would be moderately to extremely useful (seven or higher) in making it easier to engage with patients in a discussion of cost and affordability of medications. (Table 15) Respondents anticipated the resource would be used almost equally by physicians (with their patients), by staff or nurses, and by patients themselves. (Table 12) Furthermore, 90 percent of respondents stated that they would use it "often" to "frequently" (seven or higher, Table 11) and perhaps as much as ten times per day. (Table 13) The majority of respondents felt it had the potential to reduce the amount of time they spend addressing their patients' issues with medication costs, either time spent directly with patients or with third parties, such as pharmacies and payers. Sixty percent predicted a large time-saving impact (greater than eight on a 10 point scale). (Table 14a)

While respondents gave the model resource high ratings on all its features, they found that the comparisons of prices of the same drugs at different pharmacies, as well as comparisons of the prices of brand name drugs and lower cost generic alternatives, to be most useful. (Table 9a, 9b, 9c) Almost half of the respondents (42.5 percent) thought it would be extremely important for the resource to include information on co-pays for ALL insurance plans, not just Medicare Part D, and 85 percent thought this additional feature would be at least moderately important. (Table 16) But even a resource with only Part D co-pay information would reportedly be used nearly as often as a resource with all insurance co-pay information. (Table 13)

When asked what, if anything, they particularly disliked about the model drug pricing resource presented in Concept 1, a vast majority of respondents, 70 percent, answered "nothing." The most commonly voiced negative opinions were that it could be time-consuming (10 percent) and that it provided too much information (7.5 percent). (Table 10) Finally, half of the respondents thought it would be extremely important to have the resource available as an app for a mobile device (Table 17), and 75 percent saw this as at least very important (seven or higher).

Discussion

Prescriber-patient communication about medication costs and impact on adherence

Primary care physicians surveyed in this study frequently encountered situations in which high out-of-pocket drug costs impacted adherence. In these circumstances, they reported that their patients either did not fill a prescription or took less than prescribed. Previous studies show that when patients cannot afford their medications, they may be unable to initiate or continue drug treatment, which can compromise quality of care and increase the patient's need for other, more expensive services, such as hospitalization [16], [18].

Because our sample of physicians only included those most interested in addressing the cost burden upon their patients, our findings understandably differ with broader surveys of providers in some respects. While all physicians in our pilot

study discussed drug costs with patients, a study of internists and patients regarding beliefs and experiences of medication use found that just 35 percent of physicians and 15 percent of patients had ever discussed costs, even though the need was clear, since one-third of patients reported being burdened by drug costs [2]. Similarly, a 2011 survey found that only 15 percent of the physician respondents had discussed out-of-pocket medication costs frequently with patients [24]. The results in our pilot study more closely match those of a study of provider communication with senior patients, a group with high health care and prescription drug needs, and lower than average incomes. In that study, nearly half of the physicians reported that they discussed costs with at least half their senior patients in the previous month [27].

Studies do show, however, that a majority of doctors feel a professional obligation to both discuss drug affordability with their patients, and to consider costs when writing prescriptions [1]. Seventy-nine percent of the internists in the study cited above desired to discuss out-of-pocket costs with patients, while 91 percent of the physicians in the 2011 survey thought it was important to manage patient's out-of-pocket costs [24].

If physicians report such a widespread sense of professional obligation to address costs with their patients, what are the barriers to such communication? Even among our respondents, half rated the difficulty of undertaking these discussions as six or higher on a 10 point scale. Earlier studies confirm that doctor-patient communication about medication costs is difficult and can be affected by many factors, including available information, relationships (e.g. trust, satisfaction, commitment), patient variation (e.g. attitudes, beliefs, condition, coverage), practitioner variation (e.g. attitudes, beliefs, expertise, practice organization) and role expectations (e.g. socially expected behavior in this prescribing process) [28].

Reliable, accessible information on drug prices could address one of the above barriers to good communication and perhaps increase trust between patient and provider as well. A systematic review of 24 studies found that on the whole, physicians were not able to accurately estimate the cost of specific drugs. They also consistently underestimated the difference in prices between brand-name drugs and generics [29]. Not surprisingly, studies show that physician confidence in communicating about the costs of medications is influenced by their own level of knowledge of these costs. Physicians with higher perceived knowledge of drug costs were more likely to discuss costs with their patients. [27]

Respondents reported using a number of strategies to lower costs for their patients, but some of these strategies may be counterproductive. For instance, drug samples that are widely distributed by the drug industry are designed to promote the newest, most expensive brand name drugs, and have been shown to increase patient out-of-pocket costs by 50 percent on average [26]. Brochures, flyers, coupons and vouchers provided by drug companies and sales representatives are also intended to market largely expensive brand-name drugs, which often compete with equally effective, low-cost generic drugs or lower-cost brand name drugs that treat the same conditions.

Physicians in our survey spent a substantial amount of time each day (one hour on average) addressing issues related to medication costs. A common issue is handling requests from pharmacists, on behalf of patients filling a prescription, to change to a drug with a lower out-of-pocket cost. While it may take some time to use a pricing resource before making the initial prescribing decision, prescriber workload and effectiveness may be reduced if more affordable drugs were prescribed initially. For instance, a study of a tiered health plan found that patients who were initially prescribed generics or a lower cost brand name drug were less likely to switch medications later. Furthermore, the authors concluded that clinicians could improve medication adherence "by choosing wisely within a drug class and prescribing generic or preferred formulary agents when initiating chronic therapy" [15].

While lack of affordability may discourage adherence to drug treatment recommendations, some patients may resist taking prescribed medicines for more fundamental reasons. A synthesis of qualitative studies of medicine-taking found that such resistance may occur not because of failings in patients, doctors or systems, but because of concerns patients have about taking medicines in general and about the safety and efficacy of medications that have previously been prescribed to them [29]. To address general patient concerns about medication, some have proposed that practitioners practice "minimally disruptive medicine" [31], taking into account, for instance, that non-adherence may be the result of very high treatment burdens, especially among those with complex, chronic conditions. These burdens include multiple, usually uncoordinated providers, and multiple treatment guidelines and drug management policies for each chronic condition. We would suggest that high, cumulative out-of-pocket costs of multiple medications could be an important component of such treatment burdens, which prescribers would be better able to address if they had access to reliable, evidence-based information on medication options and their associated costs.

Potential benefits to increased prescriber-patient engagement and practice efficiency

Our results suggest that a comprehensive, unbiased online resource on drug prices and therapeutic alternatives could improve the quality and efficiency of patient care. Foremost, such a price transparency resource could easily provide prescribers with transparent price information, which would (i) increase prescribers' comfort in initiating and engaging discussions of drug cost and affordability issues with their patients. In addition, such a resource would (ii) increase the staff efficiency in clinical settings, by freeing up time currently spent gathering price information, or dealing with pharmacist phone calls at the point of service.

Optimally, such a pricing resource would be most valuable to prescribers if it provided reliable, automatically updated, easily accessible information on drug prices and therapeutic alternatives, for use by prescribers or other providers, and consumers themselves. However, even less sophisticated approaches may provide substantial benefits. However, even less sophisticated approaches may provide substantial benefits. For instance, another pilot study using an educational module found that providing future prescribers with very general information on drug prices and therapeutic alternatives can have a measurable impact upon future prescribers' confidence in discussing cost and affordability with patients. [37].

Broader implications for savings by the health care system
While further study of robust web-based pricing resources is necessary to predict the impact among providers and patients more broadly, it is likely that reducing the out-of-pocket cost burden for patients could also contribute to reducing total drugs costs for health plans, and our health care system overall. First, if lowering the out-of-pocket cost burden increases patient adherence, then other health care costs for hospitalization or acute care can be reduced. And within the drug market, brand-name drugs have higher copay costs, and higher total costs to health plans as well. The average difference in price between a brand and a generic was $76 per prescription in 2007, but brand and generic prices have polarized since then, with brands getting costlier, and generics getting cheaper. [38] In this context, reducing out-of-pocket costs by using more generic drugs can also produce significant savings for our health plans and health system overall.

Prior studies have shown this to be true. For instance, one study of an electronic prescribing system integrated with a clinical decision support system found a significant increase in evidence-based new prescriptions, and a reduction in the use of high-cost therapies. This resulted in savings of more than $850 per member per month in the first year. The system included both evidence-based therapeutic recommendations and cost comparisons. It did not use "forcing functions, pop-up windows or other features that directly interfered with the prescribing process or required action by the physician. It simply described the evidence (and costs) and let the physician decide" [33]. Notably, an electronic prescribing system without the decision support feature did not result in savings.

Conclusions
Our study indicates that when they occur, current prescriber-patient discussions about drug costs are time consuming, and even physicians who are concerned about the issue do not have these discussions with all of their patients, despite seeing non-adherence frequently each day. Studies of a broader cross-section of physicians have found that few discuss costs with their patients, but that most physicians and patients would like to address these issues.

Based on our pilot study, we suggest that comprehensive web-based drug pricing resources would have multiple benefits for both providers and their patients by fostering better patient-prescriber engagement, at the point of prescribing. Such a resource would provide providers with accurate price information for comparison between therapeutic options within any therapeutic class. Having ready access to this resource may give prescribers the confidence to initiate patient engagement, through communications about drug costs and affordability. Addressing a significant prescriber barrier prescriber-patient communication around affordability would likely have multiple benefits.

First, it could improve the doctor-patient relationship, by facilitating needed discussions about health care costs that support the doctor in engaging in prescribing decisions with awareness and sympathy for the cost burden faced by their patients. Second, it would help foster better prescriber - patient engagement and better shared decision-making, in the form of making a more effective initial prescribing decision. This could improve patient care, through prescription choices that would be less likely to be affected by cost-related non-adherence decisions by the patient. Finally, the resource may reduce prescriber and staff time spent investigating low-cost resources for patients, in addressing problems with patients who do not take their medications due to the cost, and in fielding pharmacy requests to prescribe cheaper medications after the initial prescription is written.

Given the interest among physicians in better engagement with patients on the issues of cost and affordability, and the current lack of comprehensive, reliable information on retail drug prices, our survey suggests that such web-based resources on drug pricing would be quickly adopted by physicians and other prescribers who are already engaged in addressing medication costs. Such resources also have the potential to be adopted more broadly, given the research showing widespread interest among physicians in discussing costs with patients in order to improve prescribing. [1]-[3]. After the Affordable Care Act is fully implemented in 2014, insurance coverage may expand significantly, but undocumented immigrants will undoubtedly continue to face barriers to subsidized insurance or Medicaid programs. In that context, providing a retail drug price transparency resource in Spanish and other languages may be necessary to help this particularly vulnerable population access affordable medication options.

Using such retail pricing resources would likely lower out-of-pocket costs for patients. In addition, accessible, unbiased information on therapeutic alternatives, including treatment profiles and side effects, would be of significant value to prescribers, and would be likely to promote health system savings overall. Including information on out-of-pocket copay costs under various insurance plans would make the resources still more effective and valuable.

There are few studies of patient barriers to communicating about drug cost burden to their providers, but ample evidence that those barriers exist, and could be adversely affecting the costs and quality of care that patients receive. Further study of how price transparency resources could help patients in discussing issues of cost and affordability with their clinicians is needed.

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APPENDIX A

QUALITATIVE INTERVIEW GUIDE
Patient/Provider Communications Regarding Prescription Prices
Medical Marketing Research, Inc. for Community Catalyst, 2012

Dr. Name _____

Thank you, doctor for participating in our study. Today our interview will focus on the interaction and communication that occurs between patient and provider with regard to costs of medications prescribed. Your responses are considered confidential. There are no right or wrong answers; we are just seeking your candid thoughts and opinions on the issues we will be discussing.

For the sake of report development, we will be recording this interview. I will start the recorder now.

1. First of all, if you would briefly describe your practice (GROUP/SOLO, URBAN/RURAL, ETC.).
2. About what percent of your patients would you say are: Medicaid, Upper Income, Working Poor, Middle Class.
3. How do you know, learn of, patient's inability to pay or problems paying for prescriptions? How do you identify these patients, and when you do, how does it impact your prescribing?
4. And about what percent of your patients would you estimate have trouble paying for the prescription medications you prescribe? What kind of trouble – how often do you think they don't get their prescription filled at all? Get only part of their prescription filled? Don't take their medication as directed in order to reduce costs? What other behaviors have you noted patients engaging in to reduce medication costs?
5. Think for a moment of one of your patients who you knew had difficulty paying for their drugs. With that kind of person in mind, how might you communicate with them about the prices of medications and their ability to pay for them. Would you initiate the discussion, or wait for them to say something? Give me an example of how that discussion might go.
6. In general, how open are you to engaging in discussions with your patients on the cost of drugs, either their own ability to pay the out-of-pocket cost or the issue of the total costs as part of shared decision-making?
7. Do you use electronic information of any kind currently in your practice to interact with or advise patients? What do you use (PROBE FOR EXAMPLES). What about any kind of electronic pricing information concerning medications?
8. REFER TO SCREENSHOT OF WEBSITE: I want you to assume the availability of an electronic price data website (accessible via computer and by mobile device app) for you/your staff to use in discussions with patients about prescriptions and pharmacy location choices. Assume that the site would be quick and easy to use; could be used by yourself, your staff, and/or your patients; would contain pricing information on virtually every product you might prescribe, list over 90% of pharmacies within a given ZIP code, and would offer:
    - ✓ Comparisons by pharmacy of the same generic or brand name drugs; price comparisons of generics vs. their brand name equivalents; and information about low cost therapeutic alternatives to brand names that do not have exact generic (E.g. omeprazole as an alternative to Nexium)
    - ✓ Availability of price comparisons by drug at all or most pharmacies in the patient's zip code area, along with mail order services
    - ✓ Availability of information on insurance plans (E.g. formularies and co-pay tiers)
9. What specific barriers do you see to the use of such a tool, even with the desired functionalities? What additional features would make it most useful – probe integration with e-prescribing, integration with other electronic systems? How interested would you be in using such a resource? How often do you think you would use it? Why? For what type of patient, if any, would you most likely use it? Who would most likely use it – you in direct interaction with patients, your staff in direct interaction with patients, patients on their own? Why?
10. How useful would the site be if it had information on copays and formulary information for Medicare part D only, not others? (E.g. uninsured patients and those whose insurance information was on the site, such as Medicare D)
11. Overall, doctor, what do you think the value and/or impact of using a tool like this would be?
12. Thank you for participating in our interview, doctor. Do you have any final advice or recommendations you would like to share on this topic?

APPENDIX B

Internet Survey of Primary Care Physicians (n=40)
Medical Marketing Research, Inc. for Community Catalyst, 2012

Questionnaire # _____

Thank you for participating in our study concerning prescription medication costs. For qualification purposes please answer the following questions.

S1. What is your specialty?
_____ PCP/GP/IM
_____ Other

S2. What percent of your time is spent in CLINICAL practice?
% of time spent in clinical practice _____

S3. About how many years have you been in practice?
Years in practice _____

S4. On a scale of 1 to 10, 1 meaning not at all concerned and 10 extremely concerned, how concerned are you with the costs of the medications you prescribe for patients?

(Used as screening criteria: Those answering 7-10 accepted for sample)

	Not at All Concerned 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Extremely Concerned 10**
Level of concern										

S5. What is your gender?
☐ Male
☐ Female

S6. What region of the country do you practice in?
☐ Northeast
☐ South
☐ Midwest
☐ West

S7. Are you in a:
☐ Solo practice
☐ Single specialty group practice
☐ Multi-specialty group practice

Q1. About how many patients do you see per day in your practice?
Patients seen per day _____

Q2. Thinking about your interactions, about how many times per day do you engage patients in discussion concerning the cost of medication and their ability/willingness to pay for medications you prescribe?
Number of times per day _____

Q3. How much time per day would you estimate you and your staff spend addressing issues related to the cost of the medications you prescribe for patients? This could be talking with patients directly as well as talking to pharmacies or other third parties about patient medication costs. ***Please give your answer in minutes per day.***
Minutes per day _____

Q4. How many times per month would you estimate you encounter each of the following situations: ***Please answer in number of times per month.***

Patient has not gotten a prescription filled because of medication cost

Patient has taken less than the prescribed dose because of medication cost

Q5. On a scale of 1 to 10, 1 meaning not at all difficult and 10 extremely difficult, how difficult do you find it to engage patients in discussion concerning the cost of the medication you prescribe?

	Not at all difficult 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Extremely difficult 10**
Level of difficulty										

Q6. When you talk with patients about the cost of their medications, how does the conversation get started?

Q7. What, if any, resources do you have available to you to answer patient questions concerning the cost of medications you are prescribing?

Q8. What strategies do you currently use to lower the cost of medications for some or all of your patients?

Please read the following concept statement. Once you have finished reading please click on the link below to view some pricing information relevant to this concept.

> *"Assume that a resource could be made available that showed you information about the costs of brand-name and generic drugs at specific pharmacies within a Zip code, and it allowed you to include all other pharmacies within a 1, 5, 10 or 20 mile radius of the Zip code. Assume that the resource could provide the actual costs of all doses of a drug, allowing you to compare prices for that drug at different pharmacies.*
> *Also assume that the resource would include the names and prices of lower cost competing therapeutic alternatives in the same therapeutic class.*
> *Assume that these alternatives were chosen by an independent scientific advisory board, unaffiliated with any drug manufacturer, based on reviews of available studies."*

Link: Concept-1 (Screenshot of hypothetical website)

Q9. In general, would you describe your reaction to this concept as:

- ☐ Positive
- ☐ Negative
- ☐ Neutral

Q10. Which of the following features, if any, do you like or find most useful?

	Not Useful 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Very Useful 10**
Recommendations of generic alternatives to brand-name drugs?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The difference between the price of brand-name drugs and lower cost generic alternatives?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The differences in exact prices for the same drug at different pharmacies?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please list any other features you would find useful. ***If you have no additional features to list please leave blank and click the continue button at the bottom of the page to proceed to the next question.***

Q11. What if anything do you particularly dislike?

Q12. On a scale of 1 to 10, 1 meaning would not use at all and 10 meaning you would use it frequently, how often would you expect to use this resource:

	Would Not Use at All 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Would Use it Frequently 10**
Frequency of use	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q13. There are multiple ways this information can be shared with patients - through you personally, through your staff, by letting the patient access the information themselves. Of the times you would use this resource, what **percent** of the time do you think you would:

a. Personally use it with patients ..... _____
b. Have your staff use it with patients ..... _____
c. Let patients know about it and let them access it themselves ..... _____

Q14. If this resource were available to you, how many times per day would you estimate you might use it in some way in discussing the cost of medication with your patients?

Times per day _____

Q15. On a scale of 1 to 10, 1 meaning no impact at all and 10 meaning a great impact, what impact would you expect your use of this resource to have on:

	No Impact at All 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A Great Impact 10**
a. Lowering the amount of time spent per patient addressing cost issues from patients and third parties like pharmacies and payors:										
b. The frequency with which patients do not get their prescriptions filled due to price issues:										
c. The frequency with which patients do not take their medication as directed due to cost issues:										

Q16. On a scale of 1 to 10, 1 meaning not useful at all and 10 meaning extremely useful, how useful do you feel such a resource would be in making it easier to engage with your patient in a discussion of cost and affordability of the medications you prescribe?

	Not Useful at All 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Extremely Useful 10**
Level of usefulness										

Please read the following concept statement. Once you have finished reading please click on the link below to view some additional pricing information relevant to this concept.

"Assume, as before, that a resource could be made available that showed you the same information as above, but it also allowed you to input the name of your patient's Medicare Part D plan, in order to see the expected co-pay amount. In some cases, a pharmacy may sell a drug for less than the copay amount.
As before, assume that the resource still shows the names of therapeutic alternatives to brand-name drugs, and the prices the brand-name and generic drugs at individual pharmacies. And if you click on a pharmacy, you can get it name, address, and phone number.
And as before, assume that the alternatives were chosen based on reviews of available studies by an independent scientific advisory board unaffiliated with any drug manufacturers."

Link: Concept-2 (Screenshot of hypothetical website)

Q17. If this resource included such information on the co-pays for drugs in Medicare plans, how many times a day would you estimate you would discuss the cost with your Medicare patients?

Times per day _____

PLEASE ANSWER THESE FINAL QUESTIONS IN GENERAL:

Q18. On a scale of 1 to 10, 1 meaning Not Important At All and 10 Extremely Important, how important would the following additional features of this resource be?

	Not Important at All 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Extremely Important 10**
a. If the resource included information on co-pays in ALL insurance plans, not just Medicare D										
	Not Important at All 1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Extremely Important 10**
b. If the resources were available as an app for a handheld device										

Q19. Roughly what percentage of your patients are:

Lower middle class/working poor _____
Middle class _____
Upper class _____
Speak Spanish as a first language _____

Thank you for completing our survey. Please fill out the information below to insure proper delivery of your honorarium.

First Name:
Last Name:
Address:
City:
State:
Zipcode:
Phone:
Fax:
Email Address:

(If not accepted through screening criteria, jumped to)
Thank you for your interest in our Survey. We are sorry but you don't qualify at this time, we have you in our data base and will keep you in mind for future studies.

APPENDIX C

Comparison of desirable features of current drug price transparency resources

	Price Transparency					Therapeutic Alternative Recommendations		
						included	**based on**	
	Free	Accessible to patients & providers	up-to-date price info	includes all retail pharmacies	includes 1-or-more on-line (mail order) pharmacies		systematic reviews of clinical evidence	objective, unbiased sources
Consumer Reports Best Buy Drugs	**Y**	**Y**	[i]			**Y**	**Y**	**Y**
www.GoodRx.com	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**[ii]	?[iii]	**Y**[iv]
www. Healthwarehouse.com	**Y**	**Y**	**Y**		**Y**			
www.BidRx.com	**Y**	**Y**	**Y**		**Y**[v]			
www.rxpricequotes.com[vi]	**Y**	**Y**	**Y**	**Y**				
www.Target.com	**Y**	**Y**	[vii]		Y			
www.CVS.com	**Y**	**Y**	[viii]		Y			
www.walmart.com	**Y**	**Y**	[ix]					

[i] Consumer Reports lists prices that are based on nationwide average prices, based on past transactions. While it is unclear how up-to-date the prices are, they are static, as opposed to dynamic, information. No individual pharmacies are identified.

[ii] GoodRx provides a 'Savings Tips' section for brand-name drugs, noting current or future generic availability. In addition, the brief description of each drug notes when other therapeutic alternatives may be available as a generic.

[iii] It seems that GoodRx groups drugs by therapeutic or chemical type, rather than make recommendations regarding the efficiency of effectiveness of one drug compared to another.

[iv] Similarly, it seems that GoodRx is not directly connected to, or currently receiving funding from, pharmaceutical companies in a manner that puts their recommendations regarding alternative drug choices in question. In fact their website is the best resource we have found to quickly determine if a new generic drug has yet become available on the national market.

[v] As of 12/13/2013, the website www.BidRx.com listed multiple mail-order pharmacies, but very limited retail pharmacies. The on-line registration process was onerous, and seemed to require corporate membership or affiliation to allow consumers to register, but a free referral code was sent to by email when requested of customer service.

[vi] While the website www.rxpricequotes.com did provide some transparency into drug prices, the available prices for some generic drugs were far higher than those obtained through GoodRx.com or BidRx.com, for the same pharmacies.

[vii] CVS, Target, and Walmart do provide lists of drugs that are available through their discount programs at certain fixed prices. But the price information is constrained by the limited list of drug products in their discount programs.

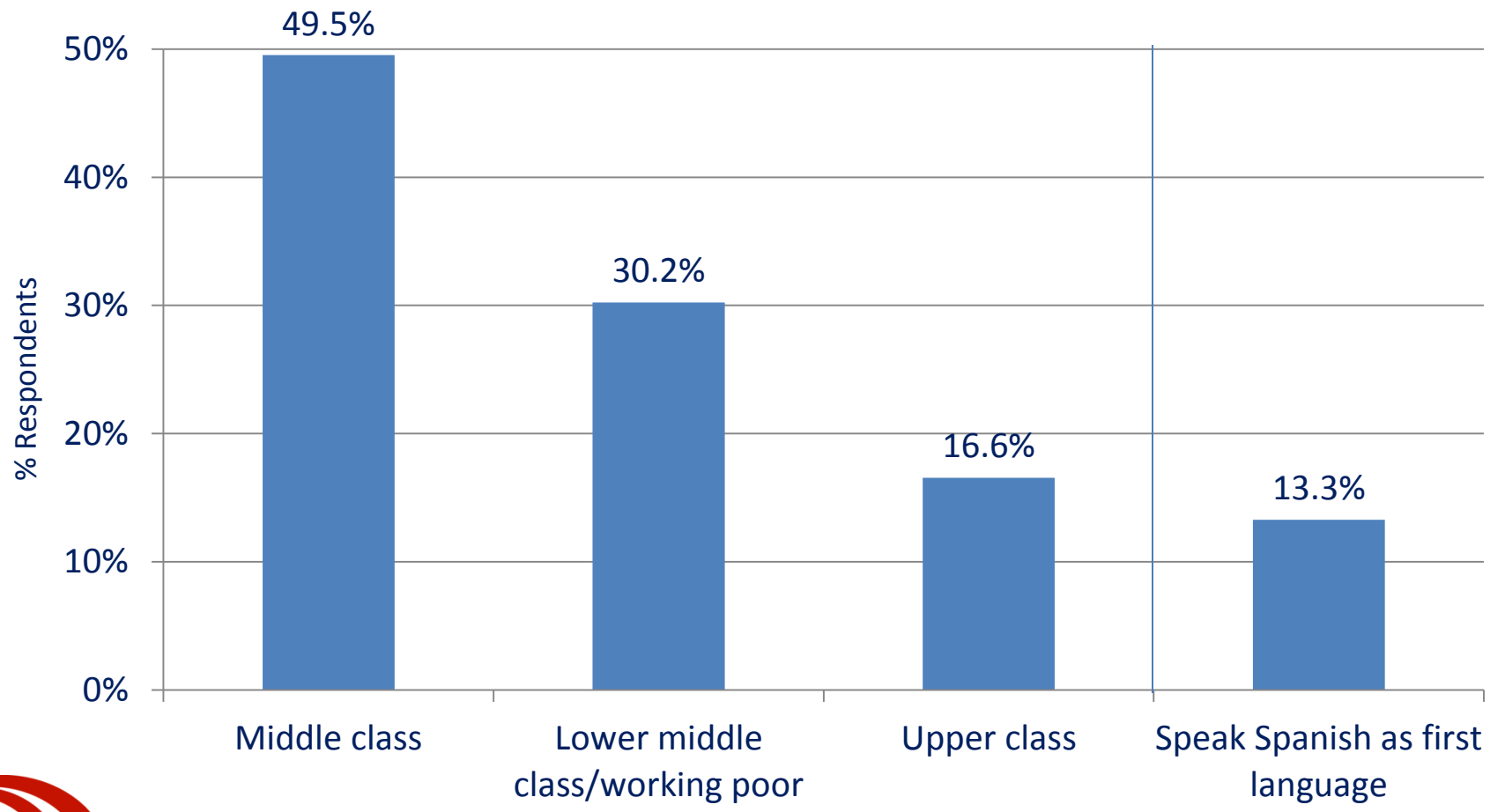
[viii] CVS, Target, and Walmart do provide lists of drugs that are available through their discount programs at certain fixed prices. But the price information is constrained by the limited list of drug products in their discount programs.

[ix] CVS, Target, and Walmart do provide lists of drugs that are available through their discount programs at certain fixed prices. But the price information is constrained by the limited list of drug products in their discount programs.

Tables

Table 1. Practice Demographics

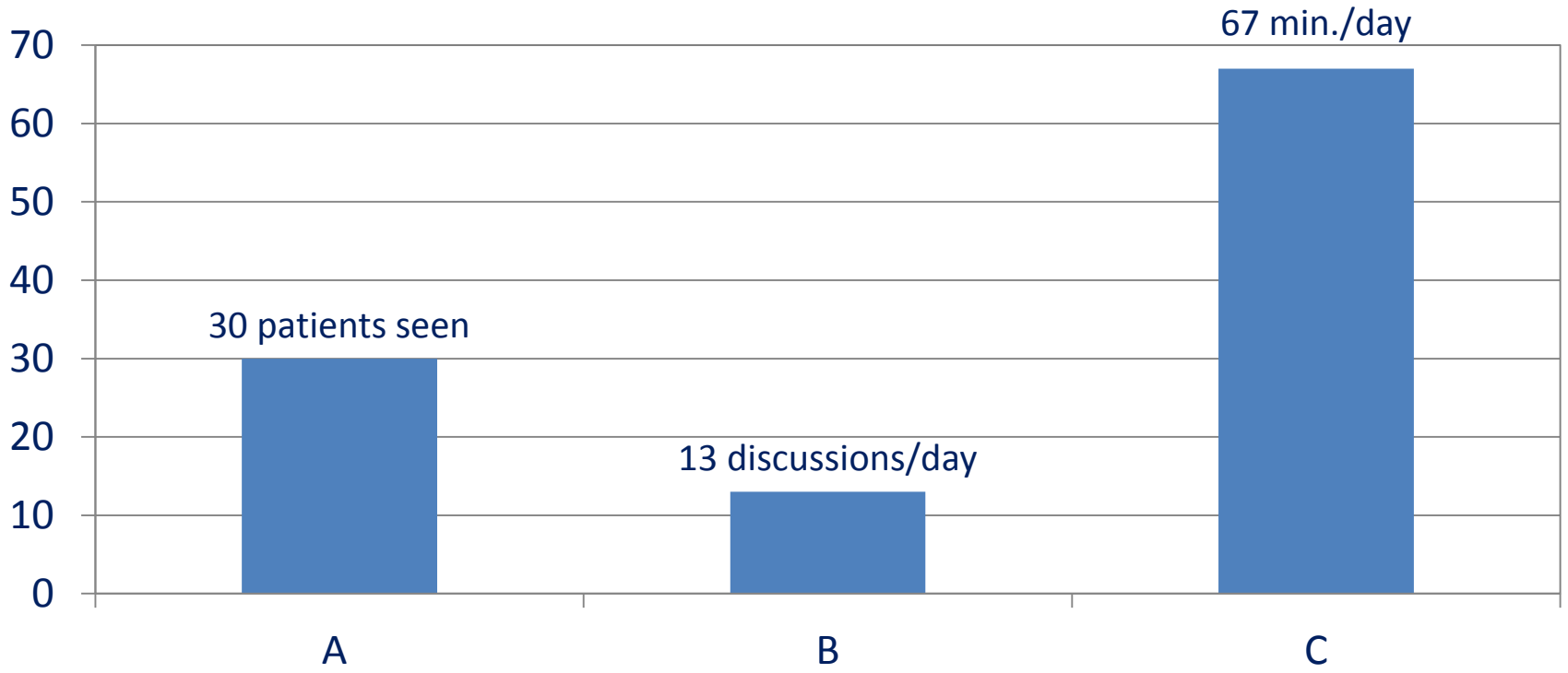
The physicians in this sample reported that their practices serve predominantly middle class patients, with an estimated one-third being lower middle class/working poor. Thirteen % of their patients speak Spanish.



Research by Medical Marketing Research, Inc. for Community Catalyst

Table 2. Physician Daily Activities

Respondents spend more than an hour a day addressing cost-related issues, including discussions with 43% (13 of 30) of their patients, on average.



A. Mean number of patients seen per day (S.D.=12.20)
B. Mean number of discussions of drug costs with patients per day (S.D.=8)
C. Mean number of minutes per day spent addressing drug cost related issues with patients, pharmacies or third parties. (S.D.=58.21)

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Table 3. Medication Non-Adherence Due to Costs

Respondents estimate encountering situations of patient non-adherence due to cost issues over 50 times/month, for an average of twice a day.(Q4)

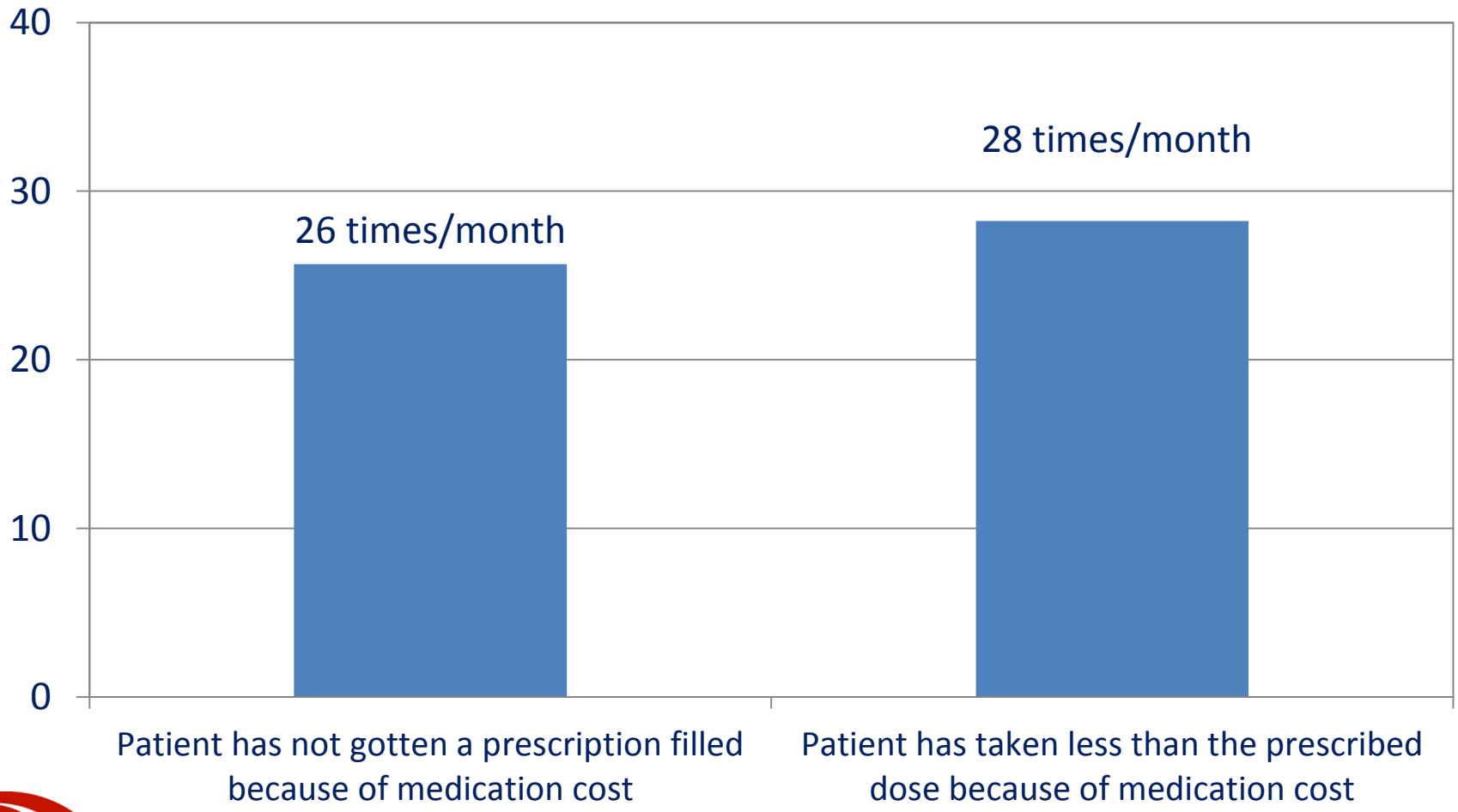

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Table 4. Difficulty of Discussing Rx Costs with Patients

Overall, half of the respondents find it difficult (6 or higher on a 10 point scale) to engage patients in discussions concerning the cost of the medications they prescribe, while half found it less or not difficult (5 or lower), yielding the bi-modal distribution below.

"5.On a scale of 1 to 10, 1 meaning not at all difficult and 10 extremely difficult, how difficult do you find it to engage patients in discussion concerning the cost of the medication you prescribe?"

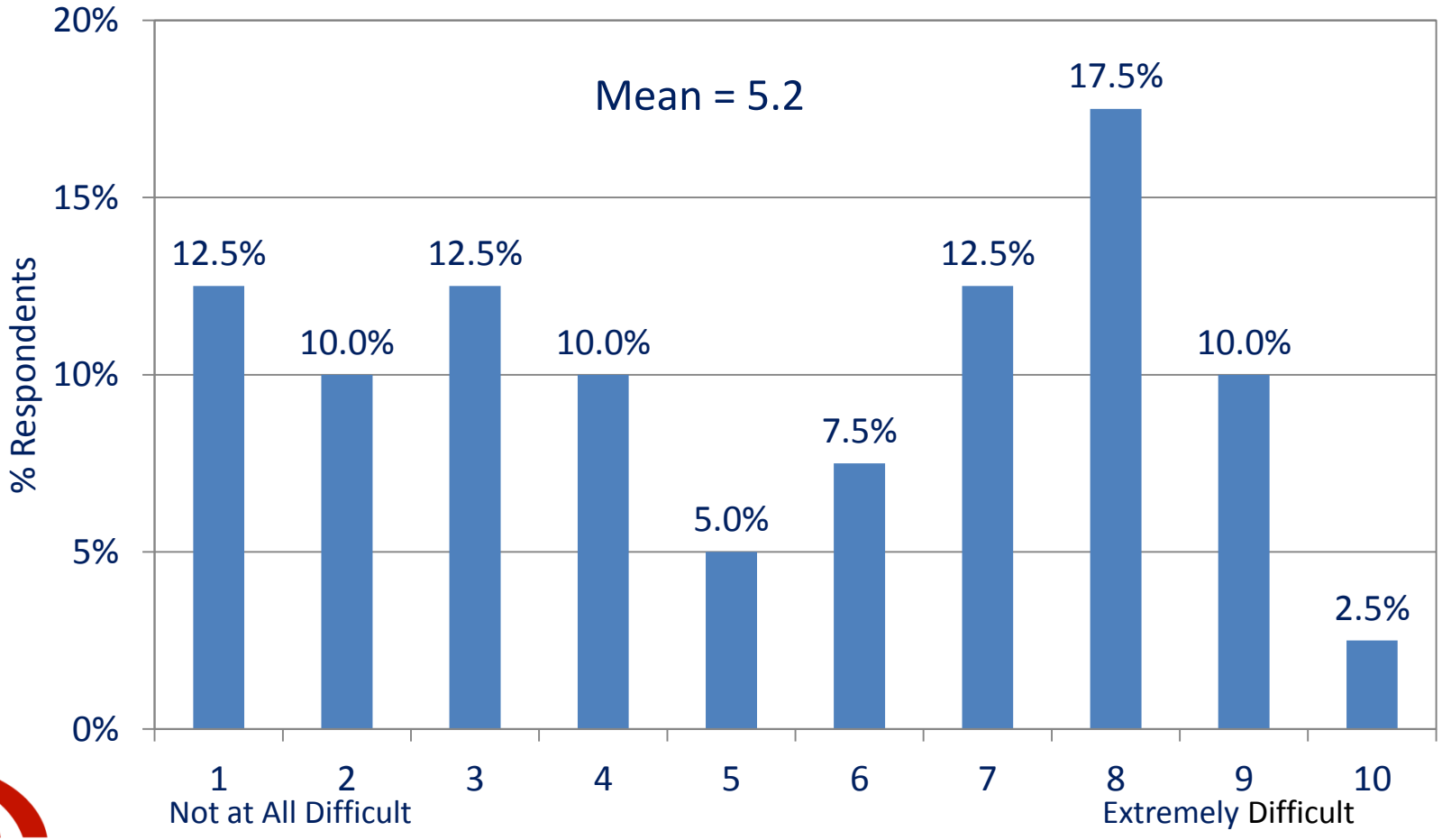

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Table 5. How Discussions of Rx Costs Begin

When they do occur, discussions of drug costs with patients are initiated by doctors in nearly twice as many different as they are by patients.

"6. When you talk with patients about the cost of their medications, how does the conversation get started?" (open-ended question)

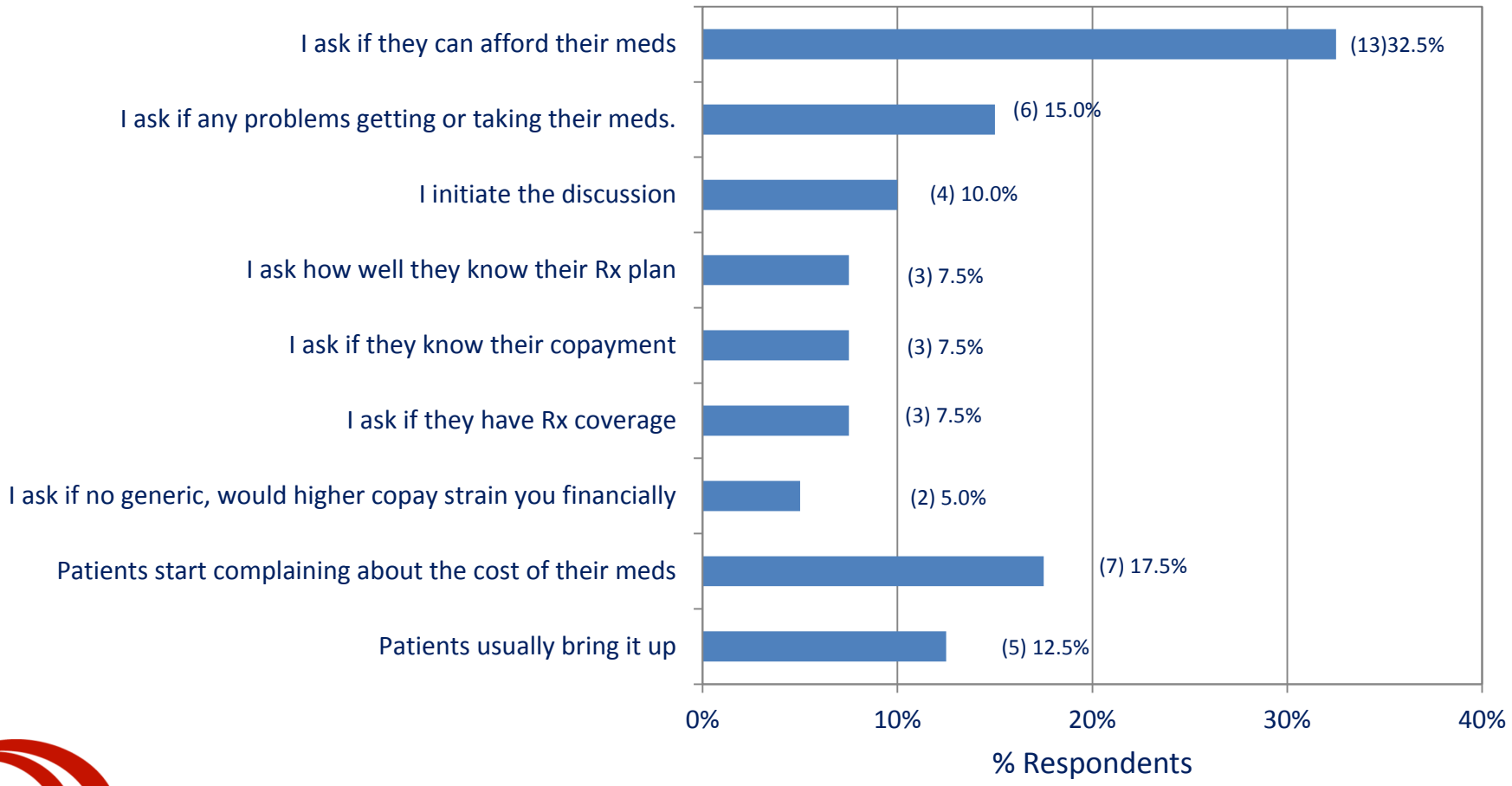

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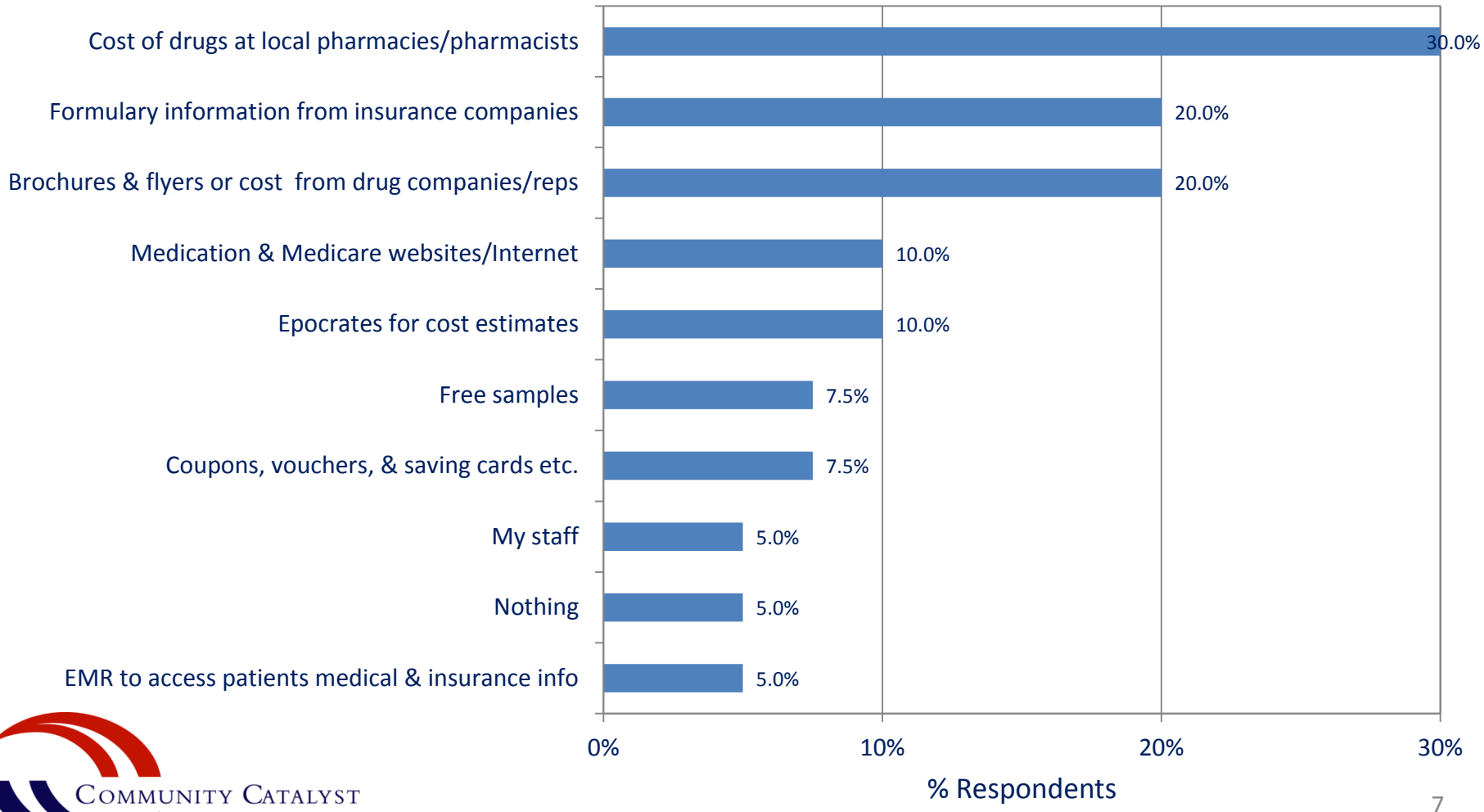
Table 6. Resources on Rx Costs Used by Physicians

Local pharmacy prices, insurer formularies and drug company promotional materials are the most commonly available resources for answering patient questions about the cost of the medications doctors are prescribing.

"7. What, if any, resources do you have available to you to answer patient questions concerning the cost of medications you are prescribing?" (open-ended question)



Research by Medical Marketing Research, Inc. for Community Catalyst

Table 7. Strategies to Lower Rx Costs for Patients

Generics and drug samples are the most popular of many strategies used by respondents to lower the cost of medications for their patients.

"8. What strategies do you currently use to lower the cost of medications for some or all of your patients?" (open-ended question)

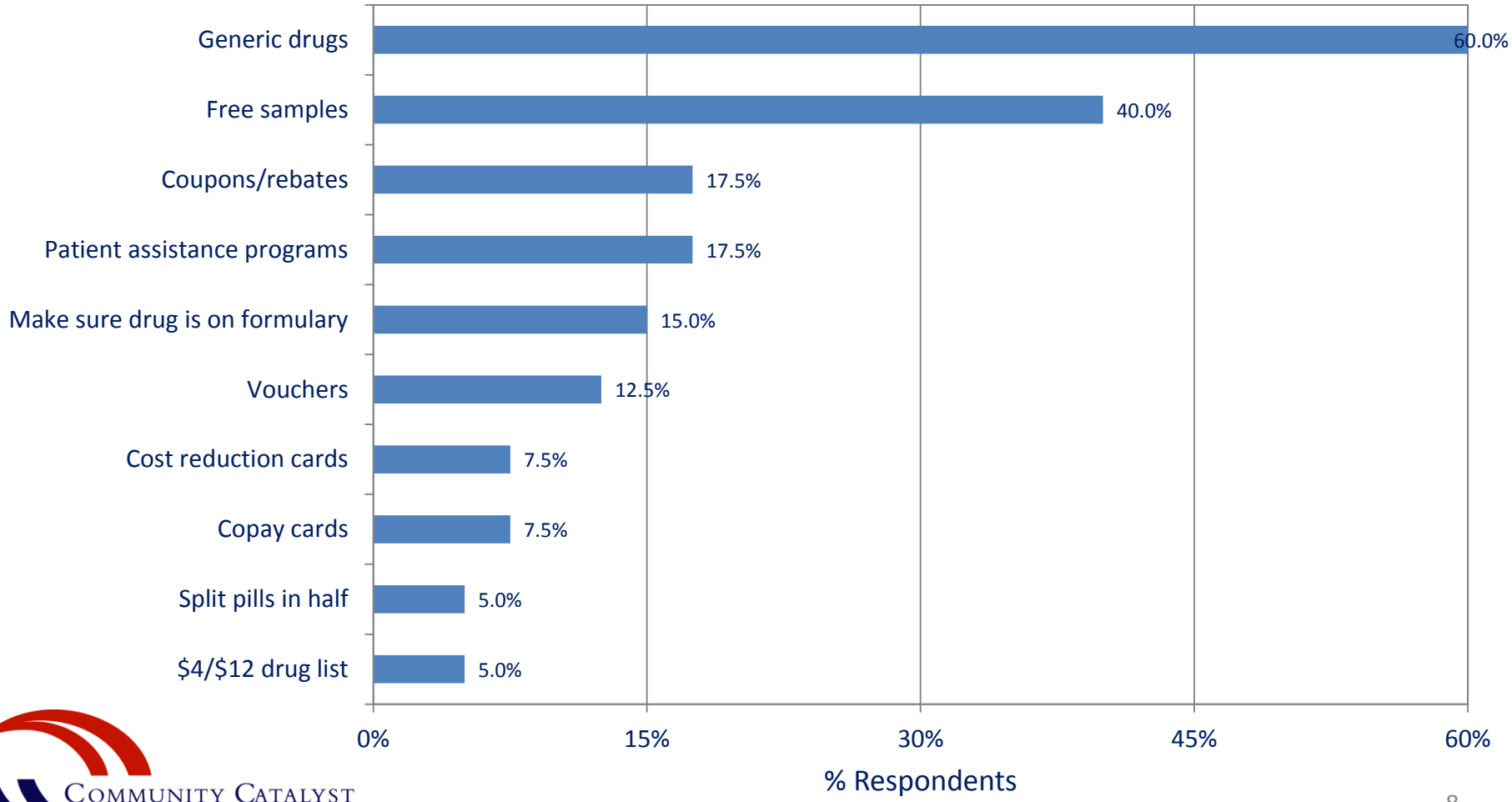


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Table 8. Reaction to Model Drug Pricing Resource

Eighty-three percent of respondents (33 of 40) reacted positively to Concept 1, while only 1 respondent had a negative reaction.

"9.In general, would you describe your reaction to this concept as positive, negative, neutral?"

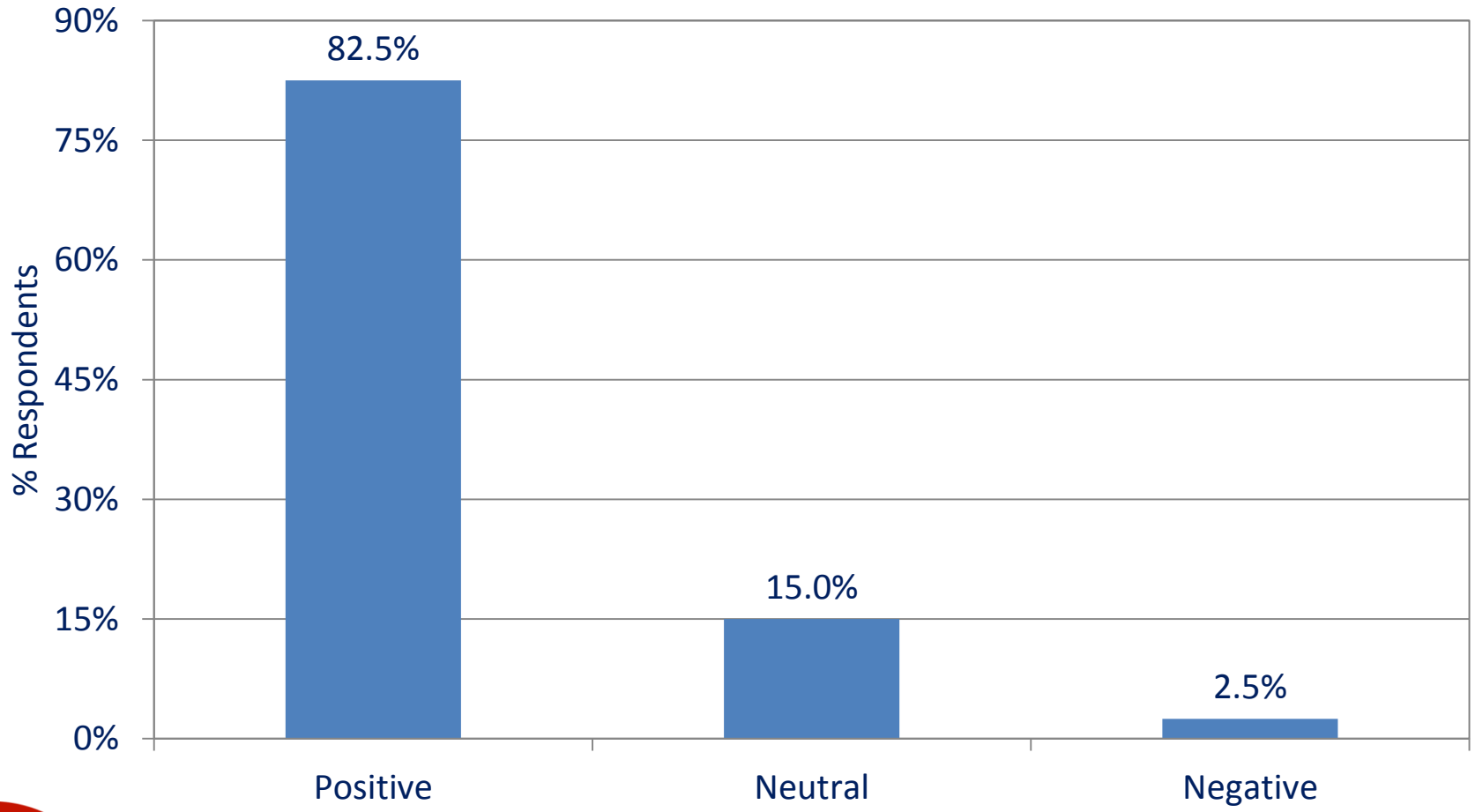

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Table 9a: What Resource Features Are Most Useful?

"Recommendations of generic alternatives to brand-name drugs" was highly useful (8 or higher) to more than half of respondents, with another 32.5% rating it as useful (6 or 7).

"10.Which of the following features, if any, do you like or find the most useful: recommendations of generic alternatives to brand-name drugs?"
(not useful) 1....2....3....4....5....6....7....8....9....10 (very useful)

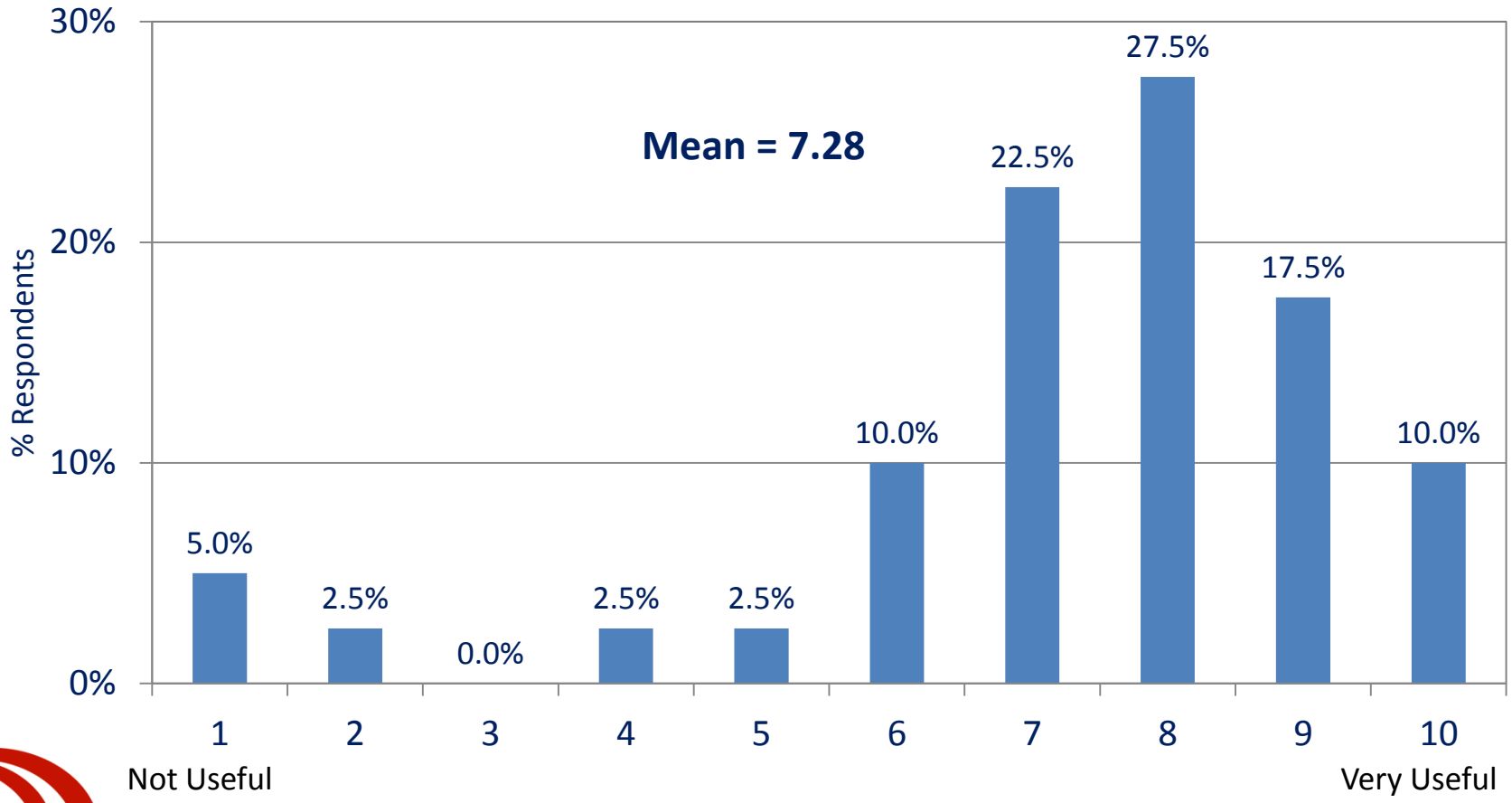

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Table 9b. Comparison of Useful Features of the Resource

Price differences between brands and generics was rated as rather useful (8, 9 or 10) by more than three fourths of all respondents (77.5%).

"10. Which of the following features, if any, do you like or find the most useful:"
"b. The difference between the prices of brand-name drugs and lower cost generic alternatives?"

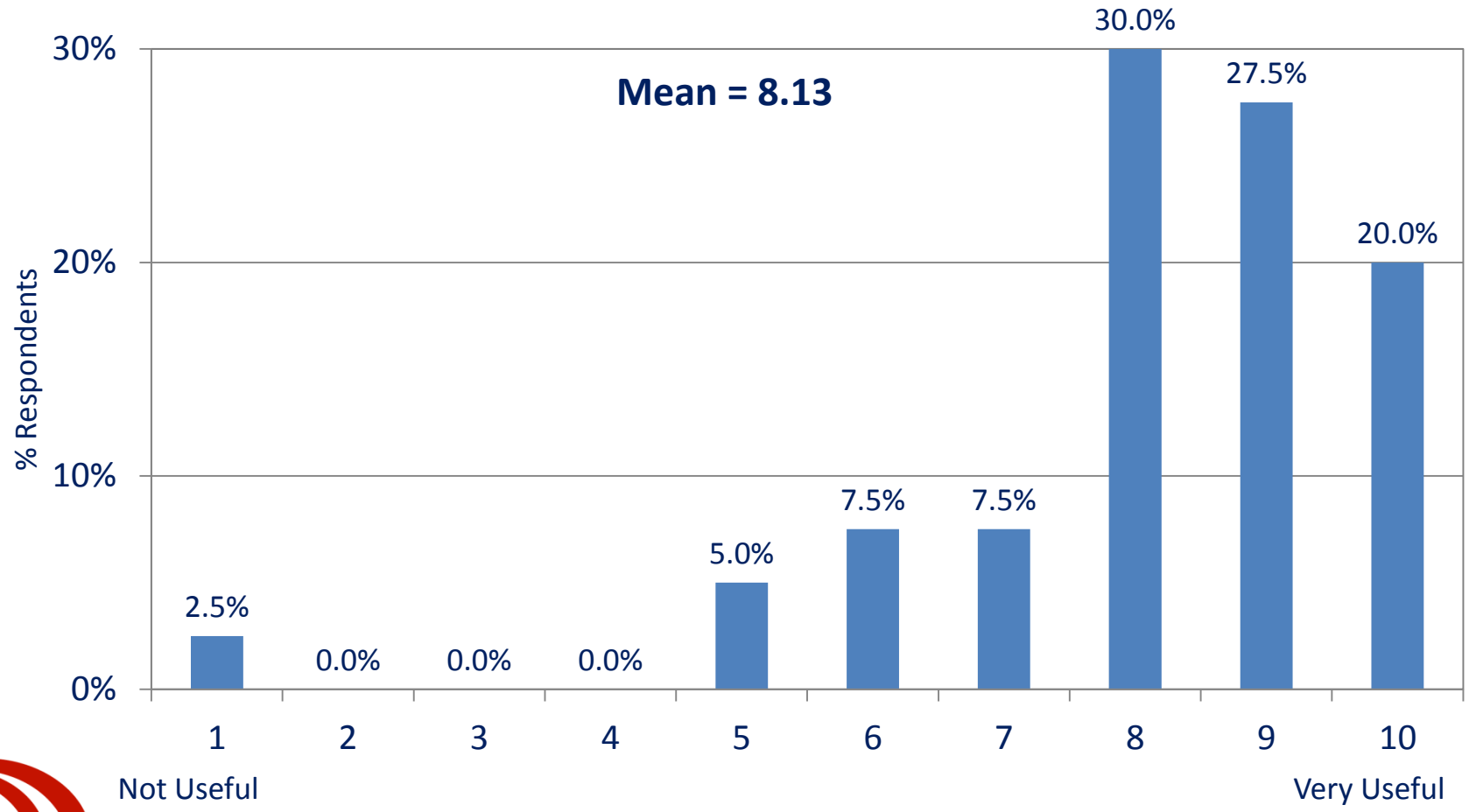

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Table 9c. Comparison of Features of the Resource

Exact price differences between pharmacies was rated as rather useful (8, 9, 10) by three fourths of all respondents, with a third of respondents (35%) rating it as high as possible.

"10. Which of the following features, if any, do you like or find the most useful:"
"c. The differences in exact prices for the same drug at different pharmacies?"

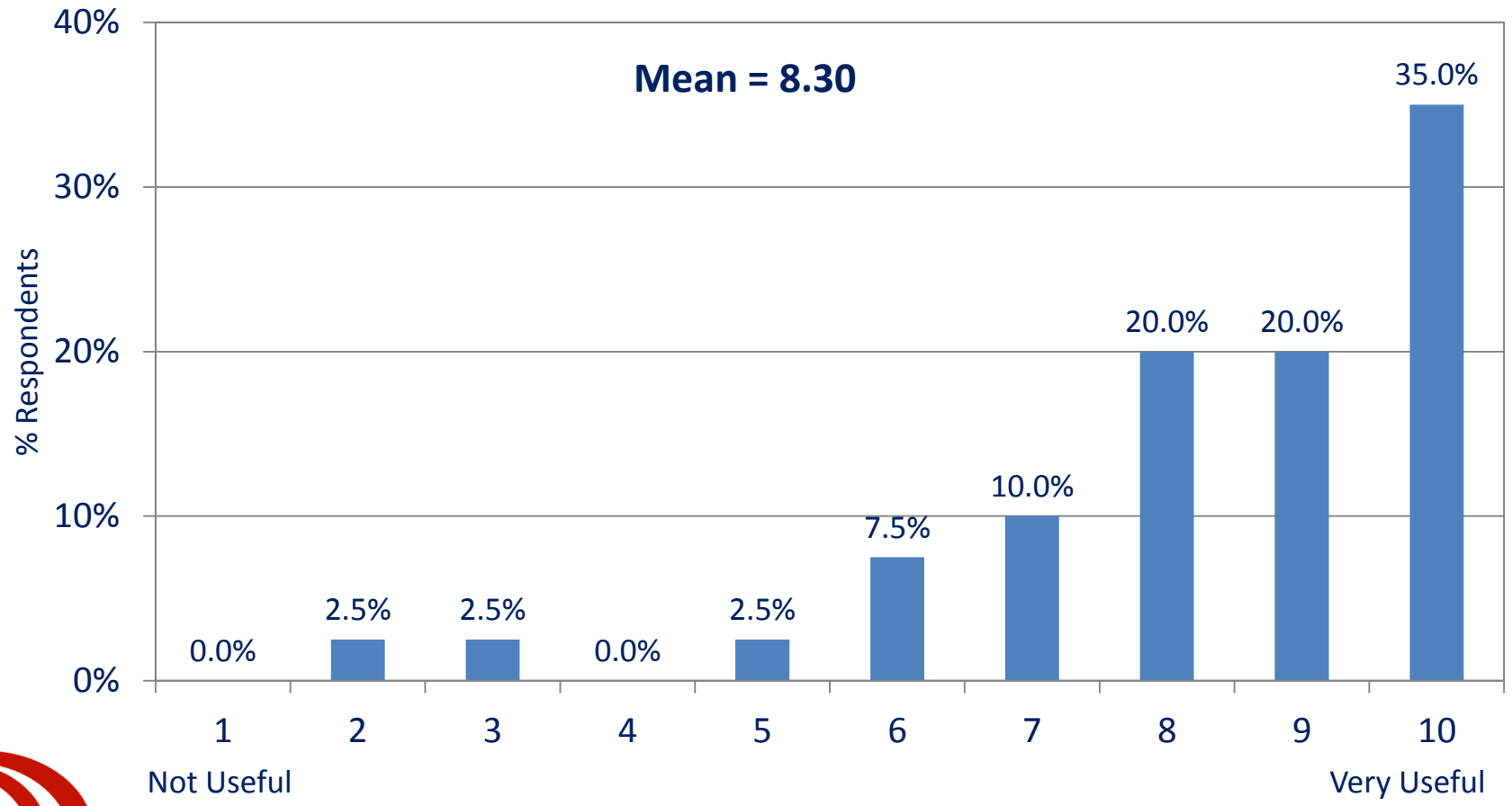


Table 9d. Other Useful Features Suggested

Nine other features were suggested, but none by more than a single respondent.

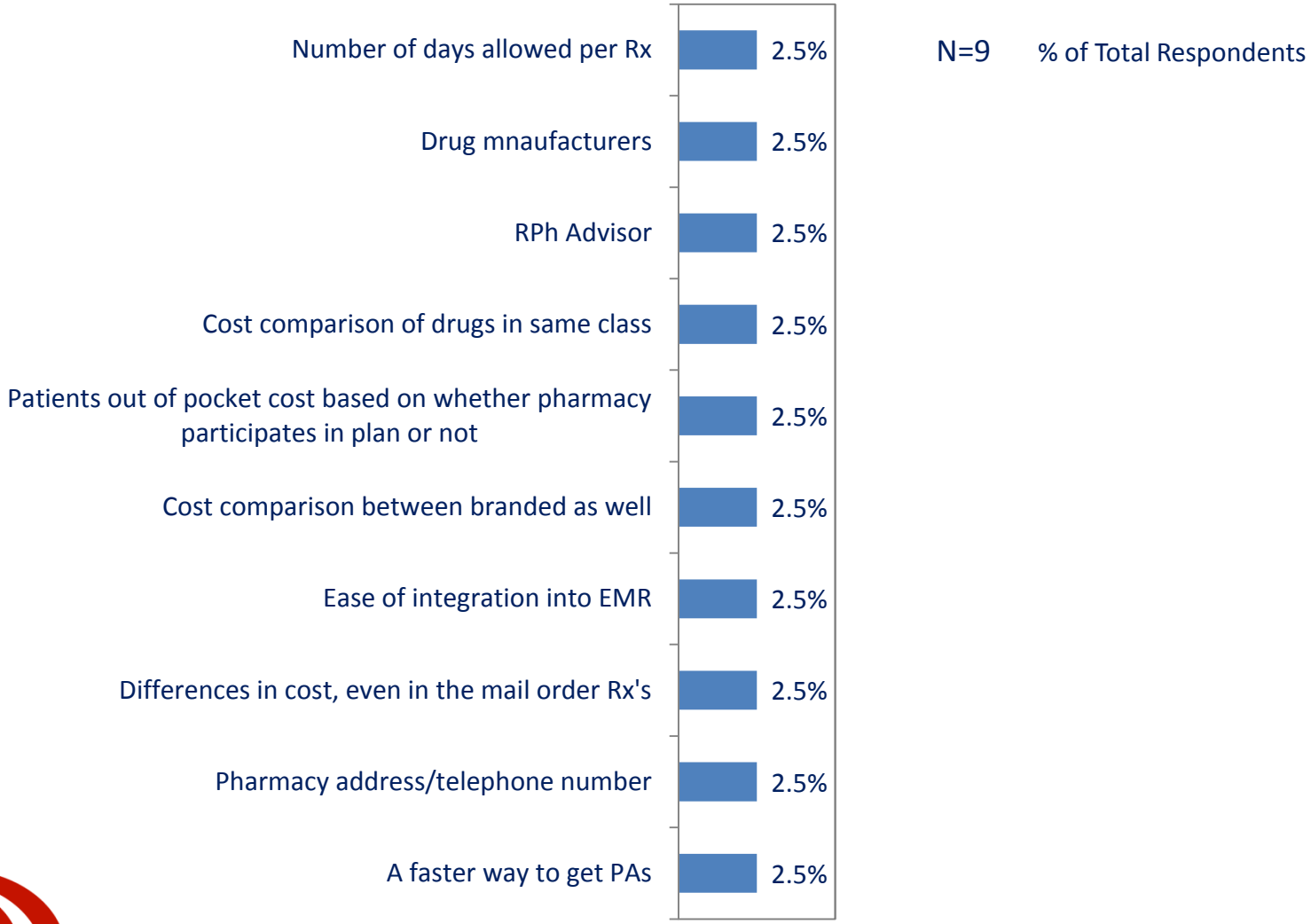


Table 10. Features of Pricing Resource Disliked

Most respondents (70%) indicated there was nothing about Concept 1 they disliked. Some minor concern were shared by 10% or less of the respondents.

"11.What if anything do you particularly dislike?" (open-ended question)

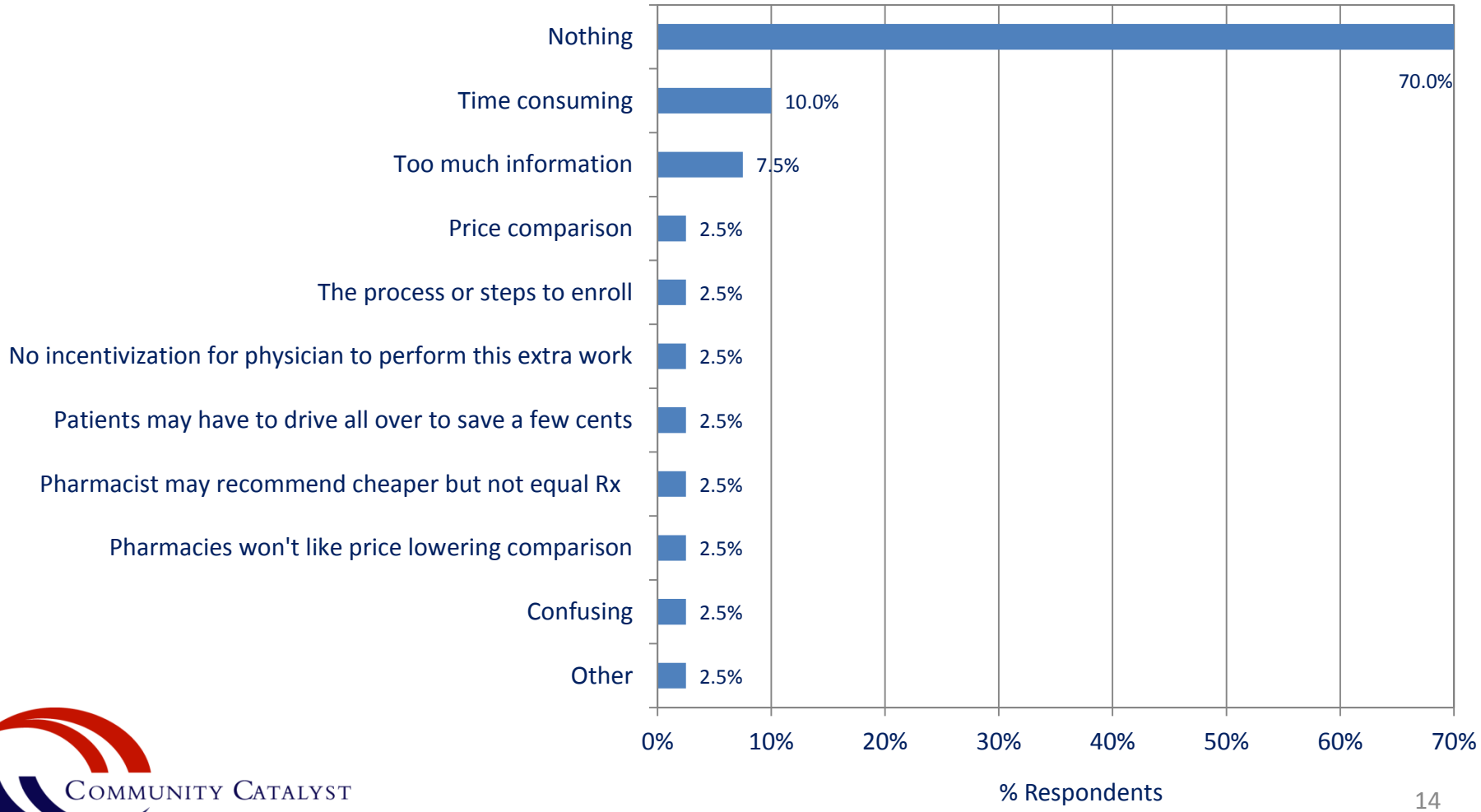
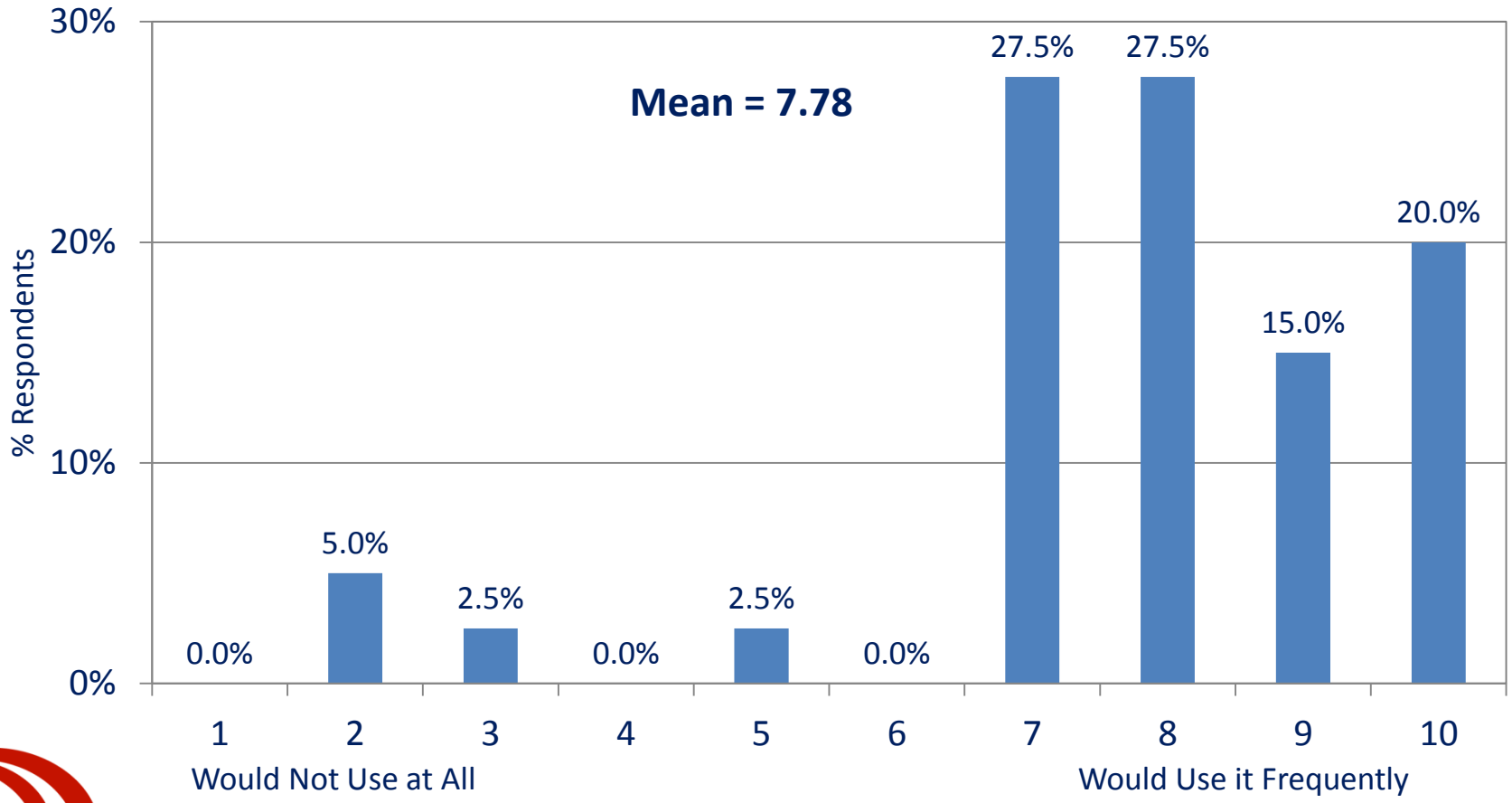


Table 11. How Often Would This Resource Be Used?

Ninety percent of respondents indicated they would use this resource with some frequency (7 or higher).

"12. On a scale of 1 to 10, … how often would you expect to use this resource?"



Research by Medical Marketing Research, Inc. for Community Catalyst

Table 12. Who in the Practice Would Use this Resource?

Resource was anticipated for use in multiple contexts – by physicians engaging with patients, by patients with other staff, or by patients acting independently.

"13. There are multiple ways this information can be shared with patients – through you personally, through your staff, by letting the patient access the information themselves. Of the times you would use this resource, what percent of the time do you think you would:"

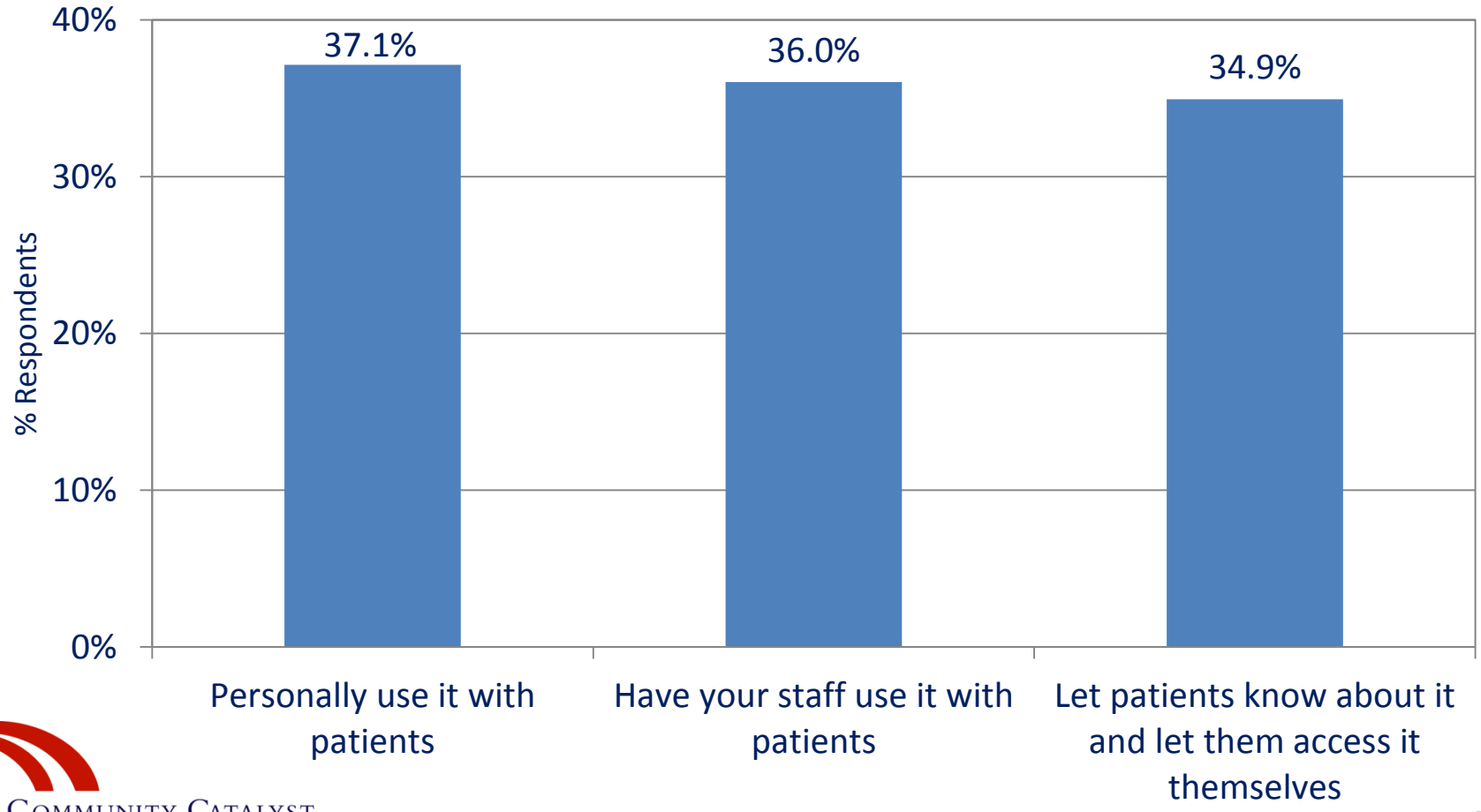
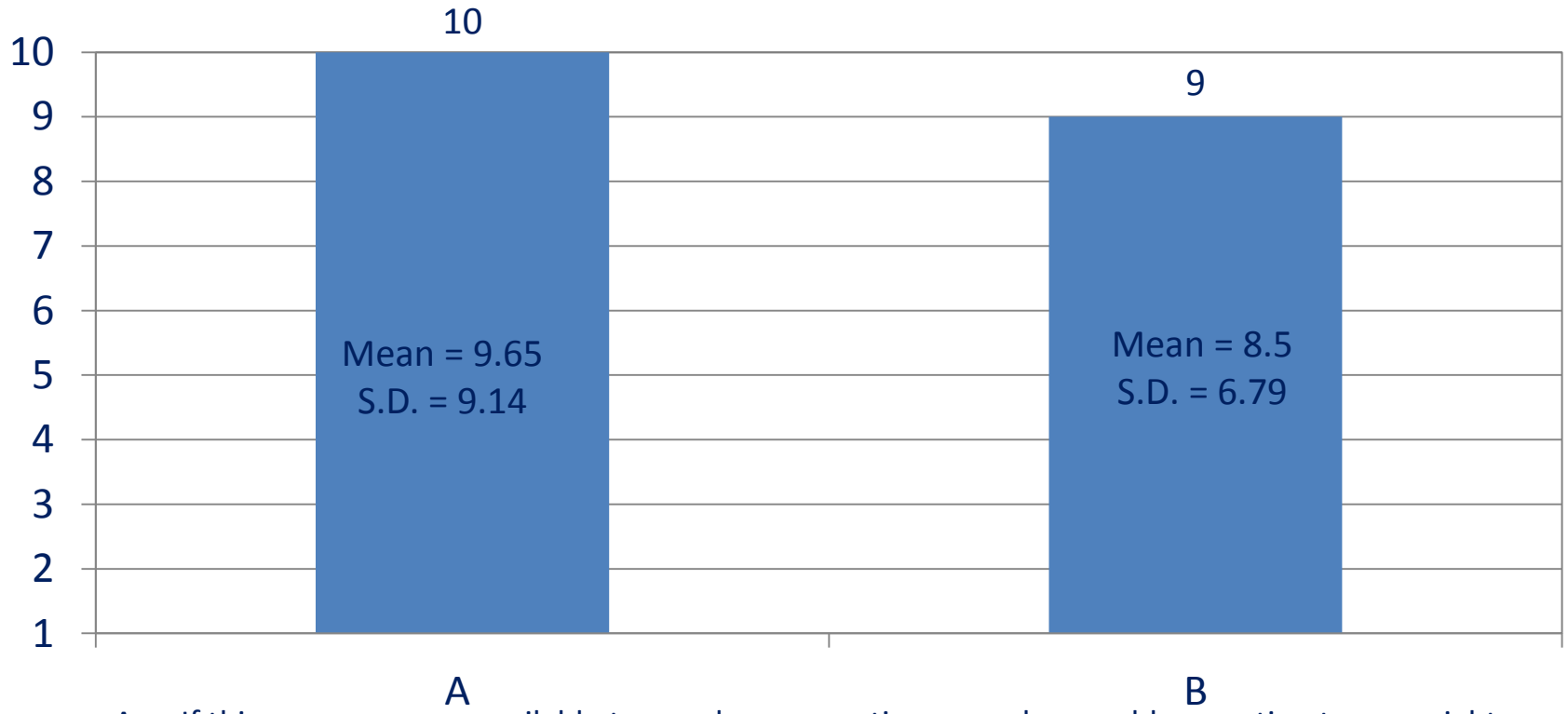


Table 13. How Often Per Day Would This Resource Be Used?

Respondents predicted using the resource an average of 10 times per day; or 9 times per day if Medicare copay information was also included.



A. If this resource were available to you, how many times per day would you estimate you might use it in some way in discussing the cost of medication with your patients?

B. If this resource included such information on the co-pays for drugs in Medicare plans, how many times a day would you estimate you would discuss the cost with your Medicare patients?

Table 14a. Impact of This Resource on Physician/Staff Time

Most respondents (72.5%) predicted this resource would have a significant impact (7 or higher) on time addressing cost issues from patients, pharmacies and payers.

"15. On a scale of 1 to 10, ... what impact would you expect your use of this resource to have on the amount of time you and your staff spend addressing cost issues from patients and third parties like pharmacies and Payors:"

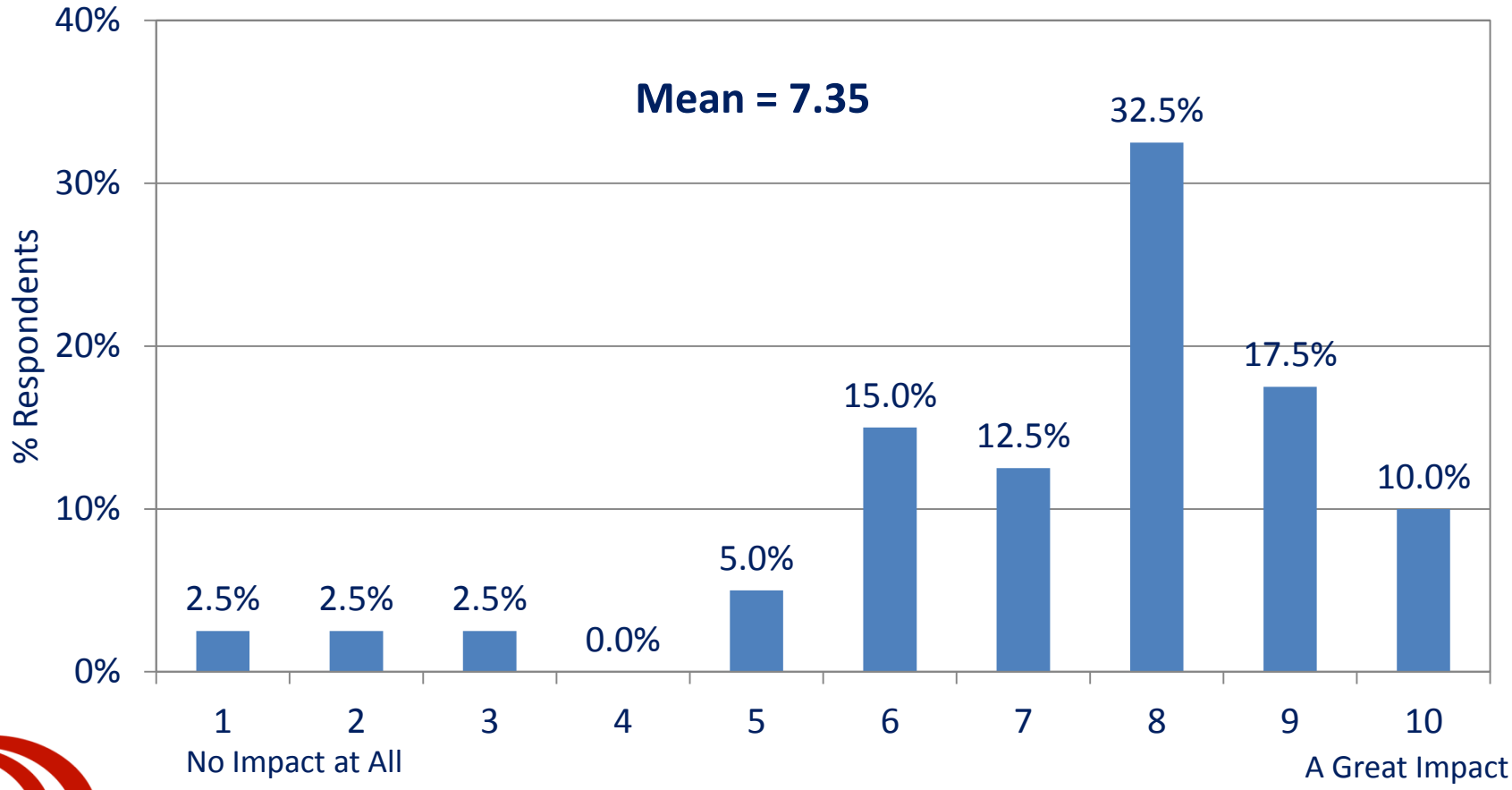


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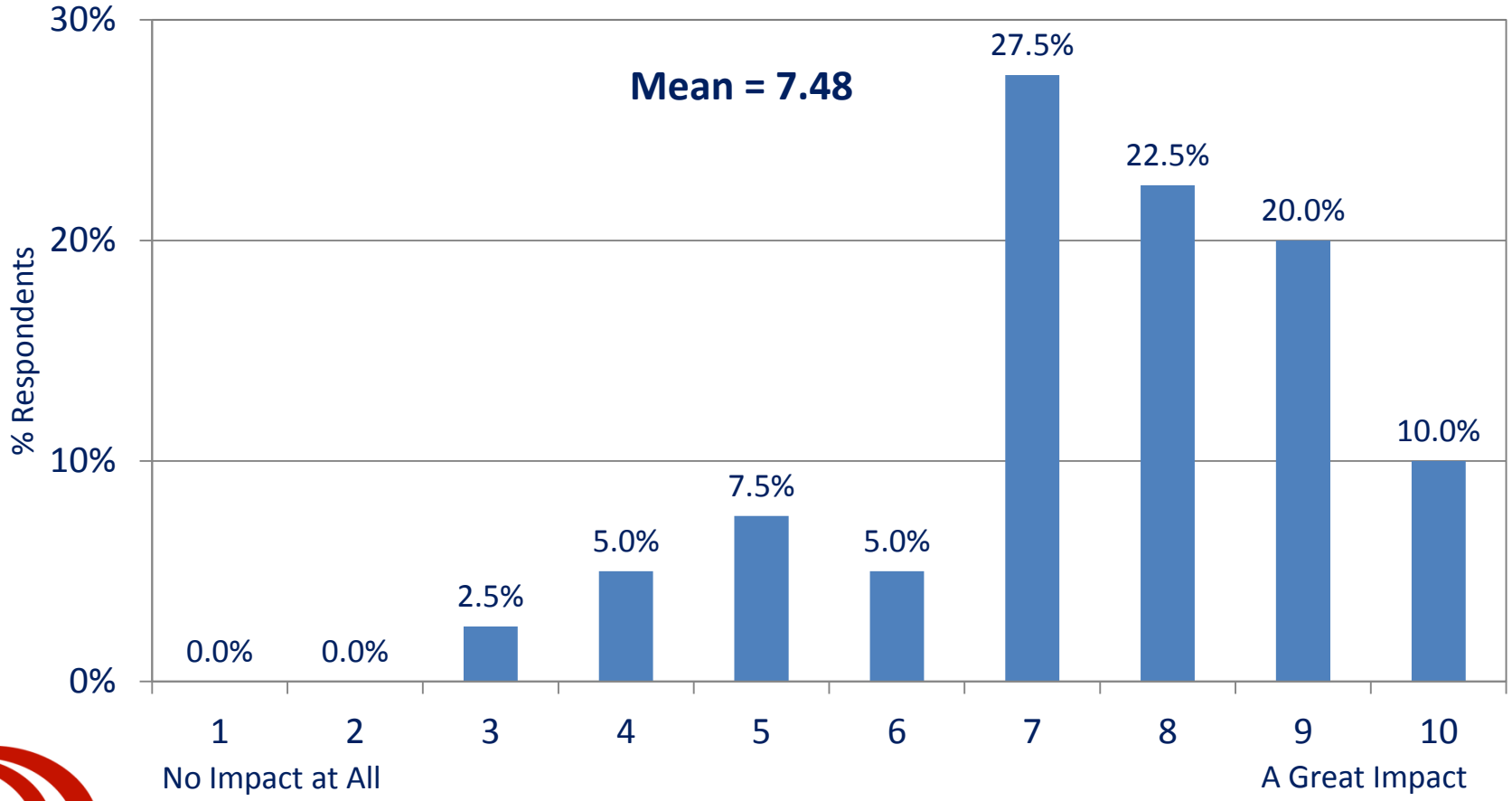
Table 14b. Impact of This Resource on Rx Fills

Eighty percent of respondents predicted this resource could significantly impact (7 or higher) price-related non-adherence (i.e. failures to refill.)

"15. On a scale of 1 to 10, 1 meaning no impact at all and 10 a great impact, what impact would you expect your use of this resource to have on b. the frequency with which patients do not get their prescriptions filled due to price issues?"



Research by Medical Marketing Research, Inc. for Community Catalyst

Table 14c. Impact of This Resource on Taking Medication

Seventy percent of respondents predicted resource could significantly impact (7 or higher) price-related non-adherence (i.e. failure to take medication.)

"15. On a scale of 1 to 10, … what impact would you expect your use of this resource to have on the frequency with which patients do not take their medication as directed due to cost issues:"

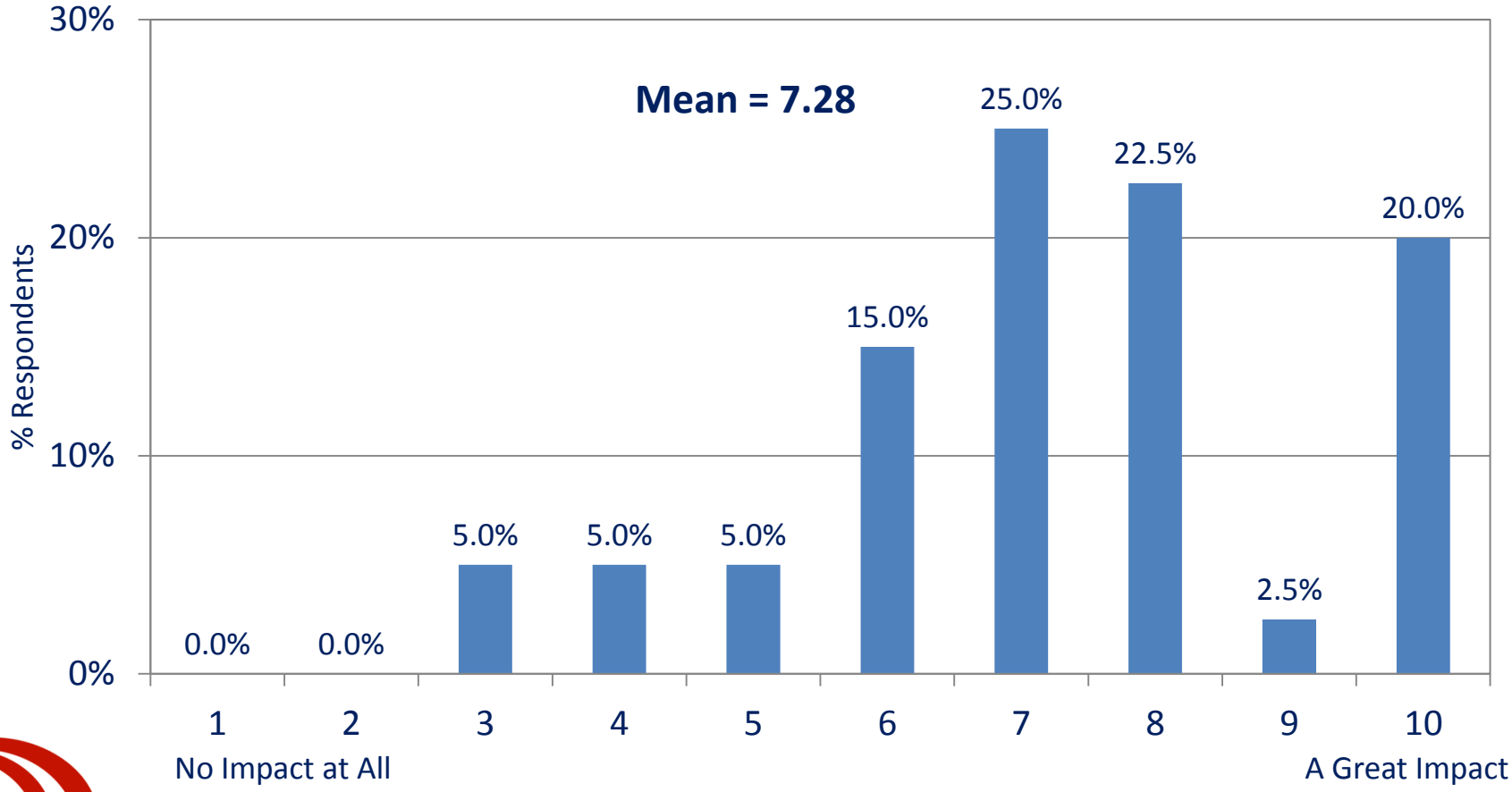


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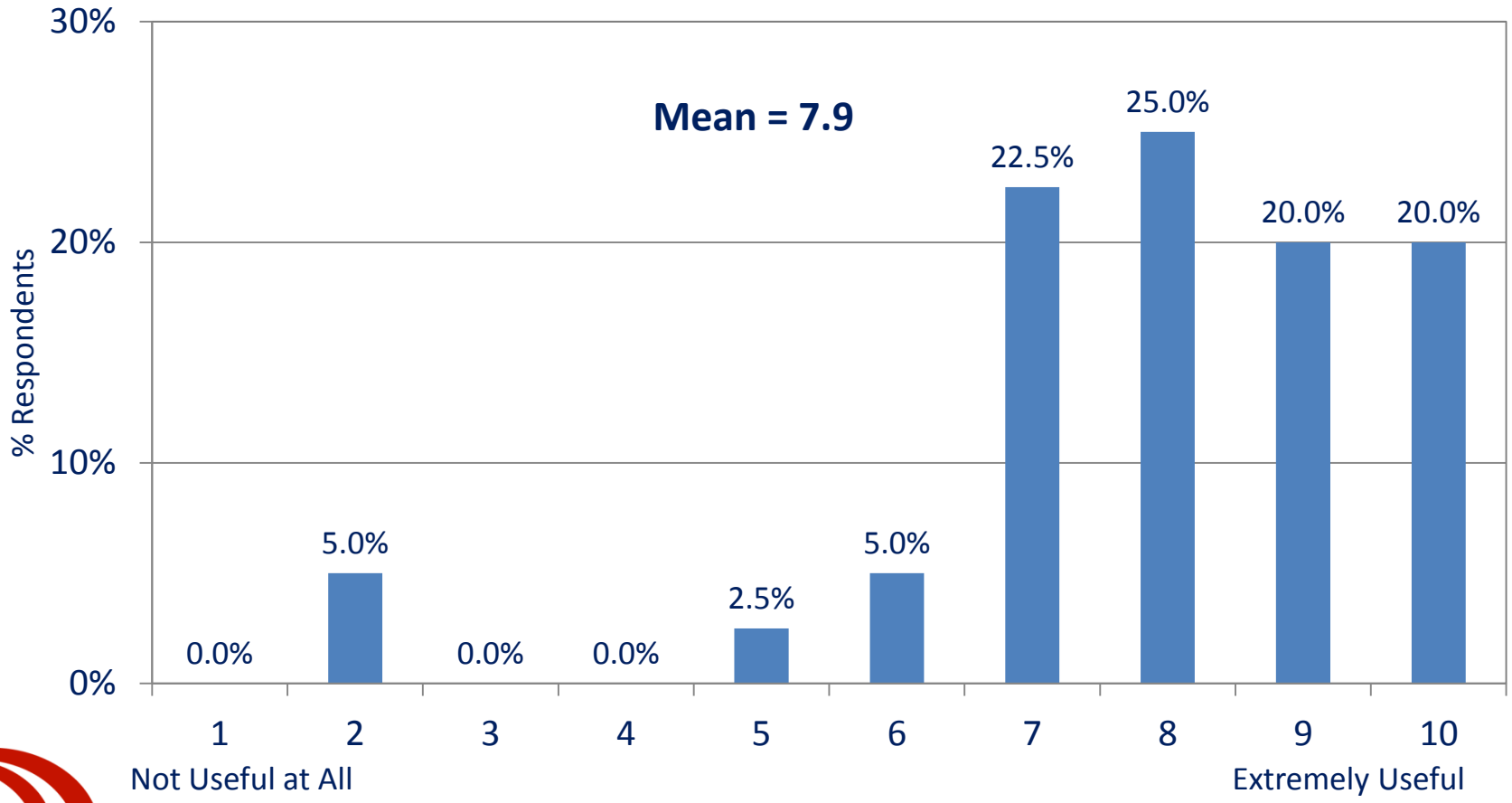
Table 15. Impact of This Resource on Patient Engagement

Nearly 9 out of 10 respondents found this resource at least moderately useful (7 or higher) to easily engage patients in discussing drug costs and affordability.

"16. How useful would this resource be in terms of making it easier to engage with your patients in discussions of cost and affordability of medications?"

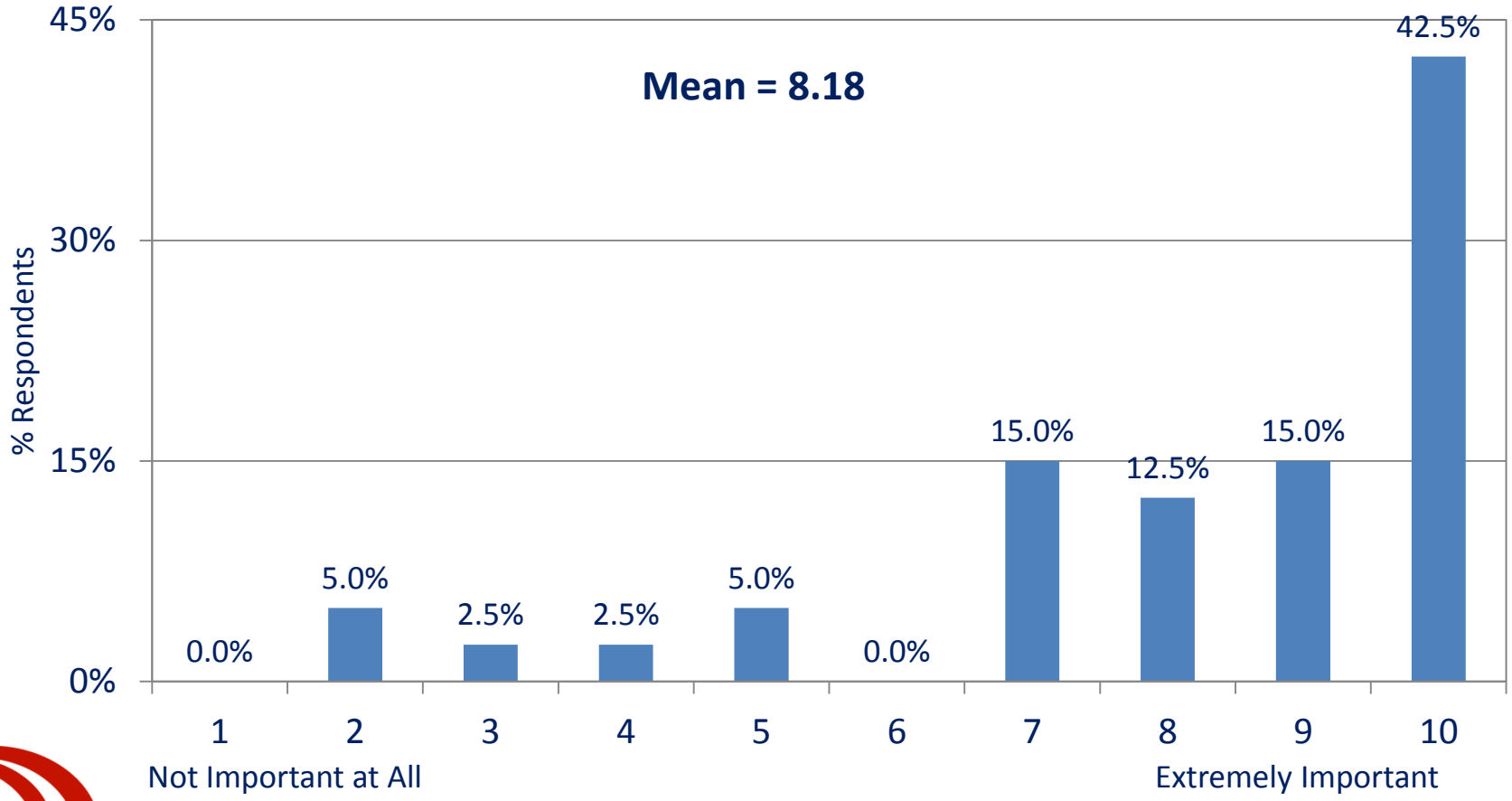


Research by Medical Marketing Research, Inc. for Community Catalyst

Table 16. Importance of Copay Cost Information

"Eighty-five percent of respondents felt inclusion of co-pay amounts for ALL insurance plans in the resource would be at least moderately important (7 or higher) and more than half (57.5%) felt it was very important (9 or higher.)

"18.How important would the following additional features of this resource be: if the resource included information on co-pays in ALL insurance plans, not just Medicare D"



Research by Medical Marketing Research, Inc. for Community Catalyst

Table 17: Importance of an App for this Resource

Three fourths of all respondents felt putting the resource on a handheld device was rather important (7 or higher); half felt it to be very important (9 or higher).

"18. How important would the following additional features of this resource be: If the resources was available as an app for a handheld device? "